

THE DEVELOPMENT OF THE DUCHY OF CORNWALL :  
Mining, Reclamation, Farming. By P. A. G.

# COUNTRY LIFE

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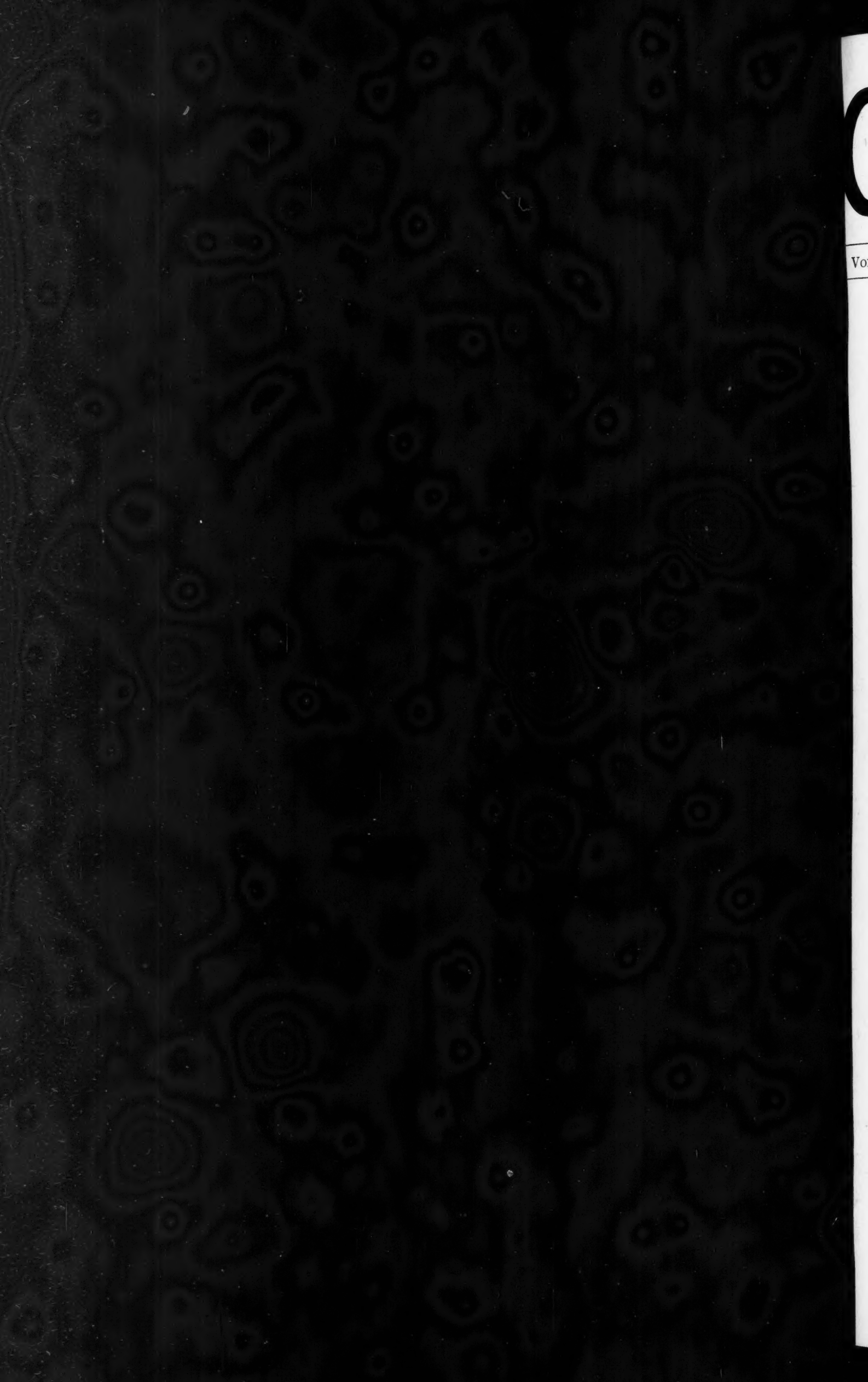
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# COUNTRY LIFE

VOL. XLIII — No. 1103.

SATURDAY, FEBRUARY 23rd, 1918.

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GENERAL SIR HENRY WILSON, K.C.B., D.S.O.  
*The newly appointed chief of the Imperial General Staff.*

# COUNTRY LIFE

THE JOURNAL FOR ALL INTERESTED IN  
COUNTRY LIFE & COUNTRY PURSUITS

OFFICES: 20, TAVISTOCK STREET, COVENT GARDEN, W.C.

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## THE RABBIT IN THE HOME

OUR readers are well aware that in these pages the cultivation of the tame rabbit has been strongly advocated since the beginning of the war. Not only has this been done editorially, but Mr. C. J. Davies, a well known expert in the business, has contributed articles on nearly every phase of rabbit keeping and written a popular little handbook which puts it in the power of the merest novice to breed and fatten the animal. But the situation is gradually growing more urgent. The ration of meat contemplated by Lord Rhondda is a very small one, and, though justified by the shortness of supply, it needs to be supplemented in every possible way. Men especially who are doing hard manual labour need to be fed in accordance with the work. It is evident that the more rabbit-keeping is encouraged and acted upon the greater will be the saving in beef and mutton—two foods which are, at any rate, essential to the men at the front. Fighting is one of those things that cannot be done on an empty stomach.

Of all domestic animals the rabbit is the most economical to keep, especially to those who have gardens, allotments,

or, indeed, access to any sort of land. Only those who have actually kept rabbits know their usefulness as consumers of what otherwise would be waste. They actually seem in many cases to prefer those parts of vegetables which it is customary to throw away. For example, we have noticed that when a carrot is offered one of them it begins by eating the green top, and the next point it attacks is the thin tail which is usually cut off and thrown away. It is the same with other roots. Skins and peelings are actually preferred to those parts which are usually reserved for human consumption. One does not need to enlarge upon the waste products of a garden. There is scarcely a vegetable grown which can be wholly consumed at table. With many vegetables as much is thrown away as is cooked. The cabbage, for instance, produces many leaves in addition to the heart, and it also has a stalk. From one of the brassica—the cauliflower—a comparatively small portion is desired by the cook. The leaves produced in profusion are thrown away unless there is an animal to eat them, and rabbits are particularly fond of the stalk of the cauliflower. In a frost it is quite common to notice that when they invade the garden they do not devour the broccoli or cauliflower, though they will eat these when the rest fails, but the first attack is made on the stump. Hence it is that the rodents do so much mischief. Another grim proof of their love of coarse food is to be found in the resolute way in which they will attack the bark of young trees. Happy is the orchardist who has not had pear and apple trees disfigured and oftentimes ruined by visiting rabbits and hares, which show an almost superhuman agility in reaching to the higher parts of the stem. It may be objected that a rabbit cannot be fattened on greenstuff. Indeed, though its taste is omnivorous, its stomach is not without a certain delicacy of its own. If it receives too much green food, the fatal disease popularly known as pot belly is almost an inevitable result. In pre-war days it was common to alternate a feed of greenstuff with one of cereals. This is a method not easily carried out to-day, but, practically speaking, it can be got over by supplying the rabbit with a large variety of plants for consumption. It knows no difference between the useful vegetable and the weed. Indeed, it prefers many of those plants, such as dandelions and sow thistles, which reduce the gardener to despair in times like these when it is almost impossible to get sufficient labour to keep the land clear of them. Anyone who will take the trouble to collect for his rabbits a selection of grasses and weeds, so that the creatures have a thoroughly mixed diet and plenty of it, will find that although he may not produce that absolute perfection of condition for which grain is an essential, the rabbits will be healthy and at least as plump and fat as their wild brothers.

These are the facts that recommend the rabbit to the rural householder, and even to the dweller in suburbia. The rabbit seems almost equally happy in a comparatively small hutch and in a grassy and wire-netted run. The conditions under which they can be kept have often been explained by Mr. Davies, and his paper on the roughest method of keeping them—that in as large a space as can be compassed, with a faggot heap in the middle for comfort and concealment—will interest those who have the land at disposal. But the rabbit, to be brought to its full size, must be in the position more or less of a stall-fed ox in miniature; that is to say, in a hutch where the principal business of its life will be that of eating. In that case it is capable of supplying food to a moderately large household, at any rate, if consumed strictly according to Lord Rhondda's rations. One of the benefits of keeping rabbits in a hutch is that the owner is far more likely to make the progeny secure, as the little rabbits are safe from the operations of prowling weasel or marauding cat. They should, at the same time, have room for exercise and be kept scrupulously clean. If the first of these conditions be not observed they will lose in size; if the latter fails they will assume a strong and unpalatable taste.

## Our Frontispiece

THIS week we reproduce as our frontispiece a portrait of General Sir Henry Wilson, K.C.B., D.S.O., whose appointment as Chief of the Imperial General Staff is just announced. Sir Henry Wilson was born in 1864, first saw active service with the Rifle Brigade in the Burmah Campaign (1885-9), and, when war broke out was Director of Military Operations at the War Office.

\* \* It is particularly requested that no permissions to photograph houses, gardens or livestock on behalf of COUNTRY LIFE be granted except when direct application is made from the offices of the paper.



# COUNTRY



## NOTES

ON Tuesday last "the immediate heir of England," with all the appropriate pomp and ceremony, took his seat in the House of Lords. The event is another interesting landmark in his development.

No Prince of Wales in modern times has received so excellent a training for the great position he, in the providence of God, will ultimately assume. When the war broke out the Prince of Wales was little more than a healthy English boy whose life had previously been spent in academic studies and innocent outdoor pursuits in the manner usual with a country gentleman's son. But the call to arms did not sound in vain for one whose distant ancestry were renowned on the battlefield. Added to his education at Oxford University is a soldier's training, and he has received it in the strictest of all schools. In the eighteenth century the Grand Tour was supposed to give the last polish to the culture of a man of birth. In a sense the Prince has made the Grand Tour, but it was not for the purpose of looking at picture galleries and studying art. The memories he will carry away from it are those of every soldier who has fought in our own trenches and visited those of our Allies. The Italian picture which is probably most deeply impressed on his mind is that of the dizzy ropeway down which the wounded were conveyed from the high peaks where they had fought to the hospitals below.

OUR pages to-day show that every preparation is being made for the Prince following the example set by his immediate predecessors, who were peculiarly at home in their country seats. We know the happiness of those days which Queen Victoria in her prime and her Consort Prince Albert spent on the Isle of Wight and in the Highlands of Scotland; we know how King Edward when he was Prince of Wales, and even after that, loved Sandringham. Princetown combines in a curious way the attractions of all these places. The scenery round Tor Royal, if it were transferred bodily to Aberdeenshire, would be considered typically Scottish, and yet the farms belonging to the Duchy are not unlikely in the immediate future to produce flocks of sheep, herds of cattle, and studs of horses that will not compare unfavourably with those for which Sandringham and Windsor are renowned.

VERY wisely the agricultural advisers of the Prince and his own inclinations have led to a fostering of purely native breeds. The Duchy is being associated closely with the revival of the improved Dartmoor sheep—a breed as well fitted to the Dartmoor pastures as the Border Leicester is to the Cheviot country. Very great national service is being done also by the encouragement and breeding of the native moorland pony, added to which there are the roadsters which probably furnished the packhorses so commonly used in traffic up to the first quarter of last century and belonging certainly to that type of the Norfolk nag which developed later into the modern hackney. There is a fine herd of Aberdeen-Angus on one farm and a collection of Shorthorns on the other, both of which in the near future will be heard of in show and sale. In a rapid survey we have almost omitted to mention

one respect in which the Duchy has set a notable example. It has not only done the ploughing asked for by the Executive Agricultural Committee, but very considerably increased it.

NOWHERE in Great Britain has the policy of increased productiveness been more efficiently applied than in the Duchy of Cornwall. One example will be found in its enterprise with regard to reclamation, a matter that we have urged from the beginning of the war. As a preliminary result it will be seen from a reference to the article on another page that there is a prospect of many hundreds of acres of good food crops being raised this year where two years ago there was only a stony stretch of gorse and heather. Even the sea has not been neglected, as witness the supply of oysters produced from the Duchy beds and now sold cheaply in London. But most important of all is the resumption in an improved way of that task of excavating wolfram from the famous Hingston Down, which was begun in 1808. Here is an industry of far-reaching importance indeed, one of the greatest value both in war and peace. It will be seen that not idly or without good grounds do we say that in no part of England has the great war policy of increased productivity been applied more thoroughly and intelligently than on the estate of the Prince of Wales, the Duchy of Cornwall.

AGRICULTURISTS cannot fail to be interested in the experience gleaned from ploughing Dartmoor, published in another part of the paper. It was a difficult job to undertake the cultivation even of a favourably situated piece of land, because, as those familiar with the moor know, it is sown with large stones. Those on the surface meet the eye, and, even so, are obstacles enough; but they can be easily shifted or dealt with. It is the stone fixed fast in the ground which tries the plough. Many makes of implement were tried, and it was a case of the survival of the fittest, which, as luck would have it, comes from America. Its origin is, however, of less importance than its characteristics. The three prime requisites in a plough on Dartmoor must in the end prove of almost equal value elsewhere. They are lightness combined with strength, and a double beam. Here is a hint which should not be given in vain to our own makers. Their ploughs are, generally speaking, too massive. It would be an advantage to use material of much higher quality in order to secure length of life to the implement and greater lightness in usage. The same remark may be applied to ploughs used with a tractor. It has been found that the tractor's value on Dartmoor lies in after-cultivation, especially disc harrowing. This is done on land that has been at least once ploughed, and though two horses draw the original furrow with ease, it would take four or five to pull the disc harrow over the wet ploughland. One characteristic of the ploughland may be noted in passing, namely, the extreme length of the furrow. In one part of the reclamation it extends to 1,450 yds.

### IMAGINATION.

The garden gate is shut,  
That once stood wide.  
The birds no longer sing,  
The flowers have died.

I linger by the pool,  
And try to hear  
Your footsteps on the path,  
As you draw near.

I start at the first sound,  
And turn my head,  
When shall I ever learn  
That you are dead?

MARGERY MOODIE.

THOSE who have some recent and intimate knowledge of what is taking place in Russia will best be able to gauge the relentless cruelty involved in the decision of the Kaiser and Marshal Hindenburg to carry on with the war. At present the many millions of peasants are set only on one thing, and that is a division of the land. For the moment nothing seems to matter to them except that, and they are not sufficiently educated to understand what subjection to Germany would really mean. At the same time, the Kaiser is shrewd enough to calculate that, once Russia becomes again clothed and in her right mind, there is likely to be a reckoning with Germany. If the division of the land were accomplished, it is clearly evident that it would happen in Russia as it happened in France, that every small proprietor would be



induced to join the banner of law and order, while those who were not satisfied would become more Bolshevik than before. It is calculated by those who have most carefully studied the facts that if left alone there would be little happening in Russia until about October of the present year, when, the last settlement having been accomplished, a civil war of a kind familiar in history must ensue. And the Empire's chance of salvation lies exclusively in the ultimate triumph of the side which adopts principles of real government instead of the vague sentimentalism which Trotsky and the other Bolsheviks would like to substitute for it. But it only needs a glance at the features of the Kaiser as accidentally brought out in Blake's choice of the type for his picture of pitiless and unrelenting cruelty to see that the Kaiser, if he can help it, will block every chance of Russia's recovery.

WE hope the members of the Food Control Ministry will take due note of the amazing prices which at the annual Scottish sales Scottish shorthorns have been making. The most astonishing figure was that of £3,360 given for an eleven months old calf belonging to Mr. William Anderson of Old Meldrum. And the buyer was no millionaire from abroad, but Mr. William Duthie of Collynie, a name famous in the annals of shorthorn breeding. It may be argued that in one way those prices of 3,000 guineas and upwards are not commercial, and the argument is sound if by that is meant that anyone desirous only of producing beef would be insane to purchase bulls at such cost. But the breeder does not take this view. He appreciates to its full extent the value of blood, and knows that, as a rule, a great bull begets great calves, and that accordingly the price of service is very high, and he will quote you instances galore in which a bull purchased at what appears to be a fabulous price has more than earned the money he cost. But, at any rate, these extraordinary prices are only an outcome of the demand there is at the moment for pedigree shorthorns. It is not only the exceptional price, but the average price that illuminates the situation, showing that stock farmers in this country as well as foreign buyers from the Argentine and elsewhere are not despairing in regard to the outlook. For the three days' sale at Perth and Aberdeen the extraordinary total of over £95,000 was realised for Scottish shorthorns.

A CORRESPONDENT in the *Morning Post* raises again the question of what does and what does not constitute food hoarding. He mentions the case of a lady fined on account of an excess quantity of sugar and jam made from her own home-grown fruit, and he is naturally concerned to know the position of persons who not only responded to the Government encouragement last summer to make preserves, but have also laid out capital and labour in cultivating trees. If valuable food so produced is liable to confiscation—perhaps coupled with penalties—very few people will be willing to incur the cost of growing and preserving fruit. But, unless some definition is forthcoming, the difficulties will not rest there, but will extend to the production of vegetable foods as well. It is of the utmost importance that the home grower should be encouraged in every possible way to augment the food resources of the country, and he must, therefore, be unequivocally assured that he will not be penalised on account of over-production.

ON the ground that the food situation is graver this year than last Sir Arthur Lee has put out an urgent appeal to the local authorities to increase the number of allotment gardens in their districts. The appeal comes none too soon, for the preliminary labour that a new allotment calls for makes a big demand on the time of people who are mostly hard at work all day. In some urban areas the difficulty that is likely to arise is shortage of available land suitable for cultivation, and to meet this the Food Production Department promises to consider sympathetically any proposals made by the local authority for utilising such land as unoccupied garden ground which can be taken in hand without seriously injuring private property. Men engaged at the numerous anti-aircraft stations around London are also being encouraged to cultivate vegetable plots. All this is excellent and should go far to remove ground for complaint that thousands of applications for allotments remain unsatisfied.

VERY closely allied with this pressing matter of the home production of food is the institution of summer time. Last year summer time began on April 7th and ended on September 17th. This year there are many reasons for urging an extension of the plan recommended by the Departmental

Committee which recently investigated the question. As it stands, their proposal is that summer time should this year extend from the second Sunday in April to the second Sunday in September. The plea of allotment holders is that the date of beginning should be a month earlier, as it is then that days are short and much has to be crowded into them. It is greatly to be hoped that this much will be conceded, even if the Government cannot go a step further and put the clock forward yet another hour from Whitsuntide till the middle of July, and so give us in those six weeks the equivalent of an extra ten eight-hour working days in which to cultivate gardens and allotments.

SO far as sugar for preserving fruit is concerned, there seems some hope that the earlier fears of the Government, that supplies would not be enough to allow for extra preserving sugar, were unfounded. Sir Charles Bathurst at Swansea, last week, said he had every reason to believe that it would be possible to allot sugar for the conversion of home-grown fruit into jam, and that a scheme for jam production in 1918 is being worked out by the Ministry of Food. He even went so far as to say that rather than that the home jam producer should go without sugar, he proposed to suggest to the Food Controller and the War Cabinet that if the total stocks of sugar are not large enough, the domestic sugar ration of half a pound a head should be cut down in order to save the fruit crop.

#### RAID RHYMES FOR CHILDREN.

Boys and girls should love the guns  
When they growl against the Huns.  
Good old guns, they growl and bark  
Just to guard us in the dark.  
Good old guns, they bark and bite  
Just to guard us in the light.  
You may visit them some day,  
And pat their great big backs and say:  
"Thank you for your care of me,"  
As you do to dogs, you see.  
But, if dogs begin to fight,  
Children know it isn't right  
To meddle, lest they get a bite.  
So, when guns begin their noise,  
Well conducted girls and boys  
Stay at home, with homely joys.  
Now, three cheers, three hearty ones,  
For our good old friends, the guns!

MARY GABRIELLE COLLINS.

IF there is any department of agriculture which the Board and its collaborating food controllers and food producers tend to discourage it is that of feeding and rearing animals for food, either on the farm or the allotment. English common-sense tends to revolt at some of the suggestions and directions issued. As an example, the advice given to kill hens at the end of February is ridiculous. During March and April, if hens will lay at all, they will produce eggs; and to kill them now would be to obtain a very bad bird for stewing purposes at the expense probably of several dozen eggs. Moreover, the time of year is rapidly approaching during which chickens are able to fend for themselves. They need very little food indeed during the growing days of spring. At the same time, it may be admitted that there is really little need for this criticism, since hens are in such demand that to get a good laying pullet at this moment one needs to pay from ten and sixpence to a guinea, where six shillings would have been a heavy price before the war.

SIR CHARLES BATHURST, in an energetic letter to the *Times*, shows that similar muddling is taking place in regard to pigs and potatoes. Never were the sties of allotment holders emptier than they are just now, and never was it more necessary that they should be full. The man with a small piece of ground who grows plenty of potatoes and rears two pigs—one to kill and one to sell—may defy famine and help his neighbour to defy it too. The talk about the pig consuming human food is, as far as this typical case is concerned, mere balderdash. The refuse of the garden or allotment is perfectly sufficient to bring the pig on, and the fattening can be managed as it was in days previous to the introduction of artificial foods. But the complement to the pig is the potato, and Sir Charles does well to insist on the need of enlarging and defining the minimum area that should be devoted to its cultivation.

# THE DEVELOPMENT OF THE DUCHY OF CORNWALL

IF the Prince of Wales likes Balmoral, as assuredly he does, it is certain that he will become exceedingly fond of his ancestral estate, the Duchy of Cornwall, to which he is paying a visit at the end of the present week. It is said that whoever has experienced two fine days on Dartmoor longs to live there always. This is as true of winter as it is of summer. Such a day was Sunday, February 17th. At Prince Town there is always a wind, and it was keen and biting on this fine winter day. But the sky was blue, the sun shone, and all that wide landscape of billowing hill and valley, of river and trickling stream wore a beauty that could scarcely be surpassed in summer. It is true that there was a sternness in the landscape that told of winter, when, as it were, the bones of the landscape were laid bare. Plantations of leafless trees showed not a hint that spring is coming. On the hills every boulder, almost every stone, stood out boldly, without any of the softening green which the heather and the bracken will bring later on. But the attractiveness of it all was irresistible. However, it is not our object here to sing the praises of Dartmoor and the adjacent land of Cornwall, or to dwell on its romance and history, but rather to give a simple account of the preparations now being made to develop the latent resources of the estate and also to provide a suitable home for the Prince of Wales; in other words, to show what is being done in mining, agriculture and reclamation. We take these topics in the order given, beginning with

## THE EXCAVATION AND TREATMENT OF WOLFRAM.

Hingston Down well wrought  
Worth London Town well bought.

The truth of this ancient saw is receiving a new, striking and most timely illustration. There are few points on which we grudge the Germans the start they obtained more than as regards their early perception of the value of the material out of which tungsten is made. Some of them who lived in this country had as early as 1898 ascertained that there was some truth in the proverb. Kit Hill and its shoulder Hingston Down one would imagine to be more familiar to the tourist than to the miner. They form parts of a grey rising ground on the Cornish bank of the River Tamar, which forms the boundary line between Devon and Cornwall and, indeed, almost makes an island of the latter county. According to local legend, the district is associated with those partly mythical heroes Hengist and Horsa, who, according to the Anglo-Saxon chronicle, landed in the Island of Thanet in 449. The name Hingston is by some thought to be a corruption of Hengist. It is a Cornish boast that practically every metal of value in the world can be found within the Duchy except platinum, and of these metals a very large number can be obtained on the hill and down we have mentioned. But the older Cornish miners did not know anything of the uses to which the material called wolfram can be put. They only recognised it as a very hard and impracticable mineral that formed a hindrance to obtaining the tin to which their search was mainly directed. That is said to be the origin of the word "wolfram"—the thing that wolfed the tin. Indeed, it was not until the eighties of last century that the Germans discovered the extraordinary value of tungsten, the product of wolfram, in the manufacture of steel implements and machine tools. At some earlier period, which has not been exactly defined, tin was extracted from the hill. In the mining, of which we shall give some account directly, remains of the old works have been found, such as pits, galleries, a wedge, and the stump of a ladder. How they set about getting the tin in days before the invention of modern machinery it would be interesting to tell if we knew with exactitude. The modern drill was not known, but wedges were in use. Obviously, too, the plan was adopted of heating the granite rock and then pouring on water to make it crack. Various other devices can be traced by the miner with an archaeological equipment.

In 1898 a company put up a crushing mill on the bank of the Tamar, and they were, we believe, the first, or among the first, to use a magnetic separator. But their activities came to an end before the war, and only within the last two years has a real attempt been made to obtain wolfram for national purposes. The cuttings on the hill were originally prospective in character, but now tunnels are being excavated in the direction of the leaders, or strikes, and the best modern

appliances have been obtained for carrying out the work efficiently. Among these one of the most formidable is a mighty plant for driving drills with compressed air. To the lay mind it is an astonishing machine capable of driving a drill at a distance of 800 yds., and thereby simplifying enormously the work of excavation.

But let us go back to the beginning and take the processes in order. First of all, the visitor is confronted by an immense cut into the hill which has laid bare the extraordinarily interesting geological formation. The rock is granite, but up through it, as it were, have been thrust, probably by the agency of fire, tall, dark irregular columns. These are the lodes in which the tin and wolfram are found, both of inestimable value at the present moment. Tin occurs in the granite as oxide of tin, and the wolfram as a dark, beautiful, flaked mineral. Later on we hope to show a photograph of the section, which will make this halting description a little plainer. The object of the cutting was, of course, to discover the lodes. Afterwards it was not difficult to follow them up by tunnelling, as, roughly speaking, they run east and west. It was a curious experience to explore these tunnels. In case of falling debris or water, the visitor has to take certain precautions. He doffs his overcoat and substitutes for it a long white garment which is rather suggestive of a surplice, and a white cap above which is placed a helmet that might have been modelled on the steel helmets used by our soldiers in France, only it is not steel, but pasteboard. Each then is armed with a candle, so that the company, "clothed in white samite, mystic, wonderful" (as seen in the crepuscular light) and with tapers in hand might have been posing as medieval penitents. You then pass along the gallery, avoiding the little trucks in which the miners are carrying out the results of their tunnelling in the shape of rock and detritus. The guide, in this case Mr. Bennett, the very accomplished engineer who is commander-in-chief at the scene of operations, shows you on the walls and roof of the gallery the tin and wolfram—the former dark, but not shining and flaked as is the other. The mineral does not occur in great seams like coal. You measure it by inches rather than yards and, indeed, it takes about a hundred tons of rock to produce one ton of wolfram. Yet its value may be estimated from the fact that the present price runs to about £200 a ton. At the end of the gallery an opportunity is afforded of observing the modern method of mining granite. Holes are drilled by the mechanical drill referred to and suitable charges of explosive placed within them, the explosive used being melinite, we believe. They are fired in succession by time fuses. But before that culmination, as may be imagined, the visitors have evacuated the gallery and retired some distance from the opening. When the explosions occur they might be listening to a bombardment on the hills near Verdun. Indeed, if a German invasion were to occur, there could be no dug-outs superior in safety to those that have been excavated in the solid granite.

It must not be thought that the galleries are straight and simple penetrations into the bowels of the earth. Observation has to be kept on the direction of the wolfram leaders, and a cut here and a cut there tells how the granite will eventually be honeycombed. At present, of course, the floors of the tunnels are, practically speaking, level. There is no need for deep mining, such as is associated in the popular mind with the usual pits for Cornish tin. It looks as though it will be long indeed before that is necessary in the region of Kit Hill. The old miner had not thought of going into the hillock from its base, but mined down from the top. To get into these old workings you ascend by a ladder from the new.

But the winning of wolfram is only the beginning of the work. Being attached to the granite, it has to be crushed and separated, and for that purpose the Germans had erected a mill close to the edge of the foaming and beautiful Tamar—no particularly picturesque adjunct, as may be imagined. However, advantage was taken of the old building and of the old appliances as far as they were suitable to the present needs. The problem that had to be solved was how to convey the granite containing wolfram economically and quickly from the hill to the river. The distance is about three miles and the slope is by no means regular. To get to the factory you must descend one steep hill and climb another, not quite so steep nor so high, and then drop again. The plan adopted was that of constructing an aerial ropeway. The standards



for this, with their safety protection over road and railway, have already been put up, but the actual ropeway is pursuing one of those slow journeys from the manufacturer to the consumer with which war-time has made us familiar. It will not be exactly a new thing in Great Britain, but one of the largest, if not the largest, of its kind. Had the slope been regular, it would have been possible to economise motive force largely by using the weight of descending baskets full of heavy granite to carry the rope back laden with similar baskets empty. But the contour of the country had obliged the ropeway to rise up and down, resembling in a rough comparison a switchback railway. It promises, however, to be a very effective contrivance, and the waste of power has been severely controlled. The situation of the mill is not, perhaps, the most suitable that could be devised, but an economy was effected by utilising the building and plant which had already been erected, instead of starting anew. The first business is to crush the rock by the aid of mighty stamps. There are batteries of Californian stamps weighing about half a ton each and of Nissen stamps weighing a ton each. The rate of concussion varies from 90 to 110 per minute. Thus is the material reduced to a powder in which particles of granite, of tin, of arsenic, and of any other metal that happens to be in the lode, are mingled in a heap of dust. The first separation is made by the help of water tables. Indeed, a miner with literary power could make the process the theme of a brilliant essay on the innumerable uses to which water can be put. The tables are indented with scars on a well considered plan, and the powdered rock being delivered on these tables, the heavy wolfram and the not so heavy tin are gradually edged off to one part of the table, while the lighter granite is carried to another, and the first act of separation is performed. But it is only the first. A beautiful and ingenious arrangement of magnets driven by steam enables the wolfram, the tin and the other minerals to be separated, the first magnet eliminating the iron, and the other metals being disposed of in due order. There is more washing and drying, and finally the wolfram emerges as a dark heavy granulated powder ready to be sent to the worker in steel, by him to be utilised as tungsten.

#### THE RECLAMATION.

Our readers will be interested in the work of reclamation which is being carried on under the direction of M. Henry Vendelmans. Before touching on it a word should be said to allay the apprehensions of those who fear that the wild beauty of Dartmoor is to be sacrificed to utility. Nothing could be more ludicrous than this idea. No one who knows the wild district with its rockstrewn spaces and hills crowned by what we can only describe as natural cairns could for a moment imagine that the reclamation of a few hundred acres here or a few hundred acres there would make the slightest appreciable difference in the landscape. To say otherwise is to suppose that a giant would look deformed because the nail of his smallest finger was pared. The truth is that there are patches of good land interspersed in the rocky waste, and that the farmers and small-holders of Dartmoor would stand to gain infinite benefit from the experimental work which is largely carried out for their instruction. I was glad to see the fields in the nakedness of winter. It is much harder to form a just opinion when spring and early summer have clothed the bare places with herbage and scattered their flowers. At present the hard mechanism of reclamation is fully exposed to the light. Preparations have been made for sowing and harvesting crops of considerable area during the present year, but the difference should be explained between the location for the main crops and the trial fields which have been laid out for the double purpose of experimenting on the most suitable forms of cultivation for Dartmoor and of showing those farmers who desire it the effect of using certain manures. Excluding such garden crops as carrots and celery, of which a fair quantity is being grown, the crops on the trial fields are to be nine in number, namely, potatoes, peas, beans, cabbages, swedes, turnips, mangolds, clover and grasses. The ground is in good tilth owing to the cultivation of last year, but the objects now being kept in view are to test which is preferable—growing (1) on the flat, (2) on ridge and furrow, or (3) on ridges.

Another variation in culture is introduced by showing the results (a) on ordinary soil, (b) on subsoiled land, and (3) on double-ploughed land. These crops will be grown under the supervision of an experienced market gardener, and the results he obtains are sure to be of great value to allotment holders and, indeed, gardeners generally.

These are, however, minor cultivations intended chiefly for an educational end. On the main portion of the reclaimed

land farm crops are being grown. They are: Oats, from 125 acres to 150 acres; clover, 75 acres; buckwheat, from 75 acres to 100 acres; turnips, 75 acres; and grasses, as much as possible. It is impossible at the moment to say with any definiteness what area will be available for the last mentioned purpose. On Sunday, when I looked over the reclaimed area, nobody was at work; but perhaps on that very account it was the easier to follow the various stages. The first is to plough up the heather with as great a width of furrow as possible. The furrows, in point of fact, look like great long, thick, tough ribbons. But the next stage is to break them up by means of a disc harrow, and when this is done a really beautiful tilth is produced. It will be very surprising, for example, if the acreage now ready for oats does not produce a bumper crop. The soil, as may be expected, is black and peaty, absolutely full of humus. Lime has been used abundantly on it. One has to see the effects of the disc harrow before understanding how wonderful they are. Buckwheat is, of course, an excellent plant, as useful as it is strong, to grow on land newly reclaimed. But, besides the preparation of the ground for these important crops, a great deal of other work has to be done. The two-mile road, so much needed for agricultural traffic, such as the carting of crops and manures, looks like becoming a splendid example of durable roadmaking. The first step is to remove the spit of black earth from the top. At first this was done by spade, but this proving too laborious, the plan now is to plough it and then toss the turf over the side with forks. A fairly deep excavation is made, and this provides a home for the boulders of moderate size. When they are laid, the road looks like a paved one. But upon that solid foundation is to be placed a liberal supply of ordinary road metal, and on that the mixture of gravel and decomposed granite which is found in abundance in the neighbourhood. The road then should be very nearly perfect. It has been a puzzle to know what to do with the great stones found on the land. At first a strenuous attempt was made to remove them, but this proved too expensive and laborious. At present those of moderate size are brought to the surface and removed as occasion serves. A big solitary one protruding out of the earth is blown to pieces by an explosion of dynamite, and other great rocks are for the meantime, at least left *in situ*. The stones actually removed from the land are available for the purpose of roadmaking. Another problem is that of draining away the surplus water, and for that economy is studied as well as effectiveness by the adoption of a well considered scheme of surface drainage. A considerable ditch is made according to the contour of the land, and into it other furrows lead, so that the surplus water is carried off immediately into the little brook which tinkles down the valley.

Labour has been a considerable difficulty on the reclamation. The Conscientious Objector, whose services are probably the easiest to obtain, has not as a rule been in pre-war times addicted to studying the arts of husbandry. He is represented as being more willing than the newspapers allege, but slow and not very docile in regard to teaching. Some of the men have improved considerably with practice, others not. But one gathers that the average Conscientious Objector, though not so black as he is painted, is by no means an ideal farm hand.

#### GENERAL FARMING.

We have left ourselves little space to deal with the extraordinary advance that has been made in regard to the livestock of the estate. But that is the less to be regretted because illustrations count more than descriptions as far as animals are concerned, and these are under preparation, but are not yet ready, so that we may return to the subject afterwards. In the meantime, it may be enough to say that the Prince of Wales is getting together a herd of short-horns that promises to compare favourably even with that at Windsor in its palmy days. The same course of securing the main reinforcements from Scotch blood has been followed on the Duchy, and if one may judge by the very fine display of bull calves and heifers, a magnificent future for the herd may be prophesied. Horse breeding is being carried on largely, and the progeny of Black Shales and Grey Shales are increasing in number and include many first-rate foals. But we shall return to this subject on a future occasion. We have not space left to devote even a paragraph to the Dartmoor sheep, which now have a flock book of their own and are being rapidly developed and brought to the front as the most suitable for these Western moors.

Under the fostering care of the Duchy and the use of good sires, the Dartmoor ponies are improving as much in quality as in number.

P. A. G.



## ENSILAGE.—II. FILLING THE SILO

BY THE BURSAR OF DOWNING COLLEGE, CAMBRIDGE.

IT is often wrongly imagined by the uninitiated that the making of silage is a simple process, requiring little special care or knowledge in order to secure a good product. It may be true that when the necessary precautions are taken silage is not difficult to make, but it cannot be too strongly emphasised that, if these precautions are neglected, sad failures will result, entailing the loss of 50 per cent. or more of the original food value of the green fodder. These losses may be due to a variety of reasons, which it may be well at once to enumerate:

1. *Rotting*.—If after the silage is made rainwater is allowed to run upon and into the material, the silage thus wetted, rots and is spoilt.

2. *Moulding*.—Again, if when the fermentation is complete, air gains access to any part of the heap, then the preserved silage becomes mouldy.

3. *Excessive Heating*.—If during the process of fermentation the material is allowed to become excessively hot, an unnecessarily large part of the most digestible food material is destroyed in producing this heat and is consequently lost. The greater the fermentation the greater the losses from this source.

4. *"Sour" Silage*.—If the green fodder from which the silage is to be made is very immature and succulent or contains much water, sour silage is produced.

5. *Loss in Drainage*.—In similar circumstances, when the green crop is either very succulent or wet with rain, considerable quantities of liquid drain from the silage and soluble food material is consequently lost.

The loss from all these sources can be limited if the principles of the fermentation and preservation of silage are understood, and if suitable precautions are taken.

### The Principles of Fermentation and Preservation of Silage.

—When any green fodder is put into a heap so that air has access, fermentation occurs; this fermentation is in reality a slow burning of the green fodder with the oxygen of the air, one of the results of which is that heat is produced; if the heap is of considerable size so that the heat is not quickly dissipated into the surrounding air, then the temperature rises rapidly up to 120deg., or further up to 150deg. and even 180deg. (Fahrenheit) in some cases. Two factors control the fermentation and the heat produced: First, the amount of air which reaches the heap; if air has free access then fermentation is very rapid, as in a loosely packed dung heap, but if air is excluded the fermentation is reduced. In practice, we want to admit a certain minimum of air to the fermenting fodder so that fermentation may commence; a sufficiency of this is in most cases provided automatically by the air which occupies the spaces between the leaves and stalks of the fodder as it is packed into the silo or silage stack, and the care of the farmer is concerned rather in limiting the supply of air and so reducing the loss of digestible food through this fermentation or slow burning. This is attained by treading and weighting the material so that the fodder packs closely together and diminishes the spaces filled with air. Secondly, the degree of wetness of the fodder controls the fermentation; if the fodder is very sappy or wet with rain, more heat is required to raise the temperature of the water contained, and *vice versa*, if the fodder is dry, less heat is required, and so the temperature rises more quickly. Again, dry fodder cannot be packed so tightly, and this increases the supply of air and so further encourages fermentation and a high temperature.

Various chemical changes are produced by this fermentation, some of which are of a complicated nature; it may, however, be broadly stated that during the process much or all of the sugar in the plant, as well as part of the other easily digestible food material, is decomposed by the fermentation. It is for this reason that it is so important to control the fermentation because the greater the fermentation and the higher the temperature produced the greater is the decomposition and loss of the easily digestible foods in the silage. Dr. Russell calculated (Journal of the South Eastern Agricultural College, 1904) that in the normal heating of a ton of maize silage as much as 30lb. of sugar or starch would be burnt up and lost.

It is sometimes suggested that during the fermentation of silage indigestible material is made digestible; there is, however, no scientific reason for believing this

to be true; on the contrary, the changes are all of a destructive nature. During the fermentation large quantities of carbonic acid gas are formed, which escape into the air and are lost; certain acids, among which acetic acid (the acid in vinegar) and lactic acid, are formed. These are of great value since they are the chief agents by which the silage is preserved.

The quantity and character of these acids determine the flavour and character of the silage, whether it is to be "sweet" or "sour." Sweet silage is produced when comparatively dry fodder is put into the silo and the temperature of fermentation rises above 120deg. Fahrenheit. It contains generally a comparatively small amount of acid, and has a peculiarly pleasant and appetising flavour. Sour silage is produced when sappy or wet fodder is rapidly filled and tightly packed into the silo so that air is excluded, and the heat of fermentation is kept low. It is said generally to be produced if the temperature does not rise above 120deg. Fahrenheit, though this is not always the case. Sour silage contains a high proportion of acid and has a most disagreeable and tenacious odour, and though often readily eaten by stock is, in some cases, rejected by them.

**Methods in Practice.**—The practice of making silage differs according to the manner in which it is stored, whether in a silo or in a silage stack. To take the case of silage in a silo first. The crop, if of oats and tares, should be cut when the oats are in milk and the seeds of the tares beginning to dent the first formed pods; at this stage the crop has reached its maximum food supply and the stems have not yet become fibrous and indigestible. Usually the crop is left to lie for twenty-four hours in the field after cutting to wilt and lose perhaps 15 per cent. or 20 per cent. of its moisture. The crop is then carted to the silo; it is chaffed in a combined silage chaff-cutter, by which the fodder is chaffed into lengths about half an inch to one inch long and blown by a fan through a long metal tube to the top of the silo, from which it is led through more jointed metal tubes to within 4ft. or 5ft. of the surface of the silage for distribution. The material is kept trodden tightly by one or more men or boys, great care being taken to keep the fodder well trodden at the sides, since friction with the walls tends to keep this from settling. Most American authorities recommend the keeping of the sides highest in filling, but I am inclined to believe that this is not correct, and that the centre should be kept highest, because in this case, as the centre settles it will press both downwards and outwards against the walls, and so prevent the tendency of the silage to come away from the walls, and the consequent entry of air and production of mould. If the silage is wet with rain or very sappy it should not be too tightly trodden.

The filling may occupy three or four days, for the material packs in very tightly, especially when fermentation becomes active. As the top is being completed it is preferable to use freshly cut material instead of partly dry, so that this may settle more tightly on the top to exclude air. Finally, since a few inches

at the top are invariably spoilt, it is well to cover the top with a layer of nettles or grass brushings to prevent waste of good fodder.

After filling is complete, the silage still continues to settle, and for a few weeks the top should be trampled for a short time two or three times a week to keep the top solid and to prevent air and mould penetrating. In many cases the settling after filling is considerable, so that a second filling is necessary to top up the silo; before this is done the mouldy layer on top should be thrown out.

When silage is made in stacks, the material is not chaffed, but stacked whole. In this case it is not advisable to allow the fodder to dry too much in the field, otherwise it is liable to become unnecessarily hot, and the danger of sour silage is not great because any excess of moisture can easily drain out of the open stack. The stack requires to be carefully built, kept level, and well trodden. After all the green fodder is stacked it is well to trim off gin. or so from the sides of the stack with a hay knife and pitch the trimmings on top. This leaves the sides of the stack neat and tight and prevents unnecessary waste at the outsides. Finally, the top may be covered with waste green material and then weighted or pressed. The methods of weighting will be discussed in a future article.

ARTHUR AMOS.



FILLING A SILO.

## OUR WAR HORSES IN FRANCE—THE CROSSING OVERSEAS

THEY passed out of the gate and away to France in threes. "Eyes right!" commanded the squadron leader as the files of threes came up to the Commanding Officer, and the man riding the near side horse did as ordered and looked high authority full in the face. The Colonel solemnly acknowledged the tribute of respect for the King's uniform, but his eyes were focussed on the horses, not on the man. For there was being enacted the last scene at the remount dépôt in England, the dépôt which has never made so much horse history as a receiving and collecting station for all the horses and mules from the scattered training remount dépôts throughout the United Kingdom. They were the animals destined for their important part in the war zones and they had come in as fit for overseas. Ostensibly they were fit, too, since both in theory and practice there should be unanimity as to what constitutes fitness. That unanimity does not always exist is another story. One can never account altogether for the part human nature, with its weaknesses and vanities, must play.

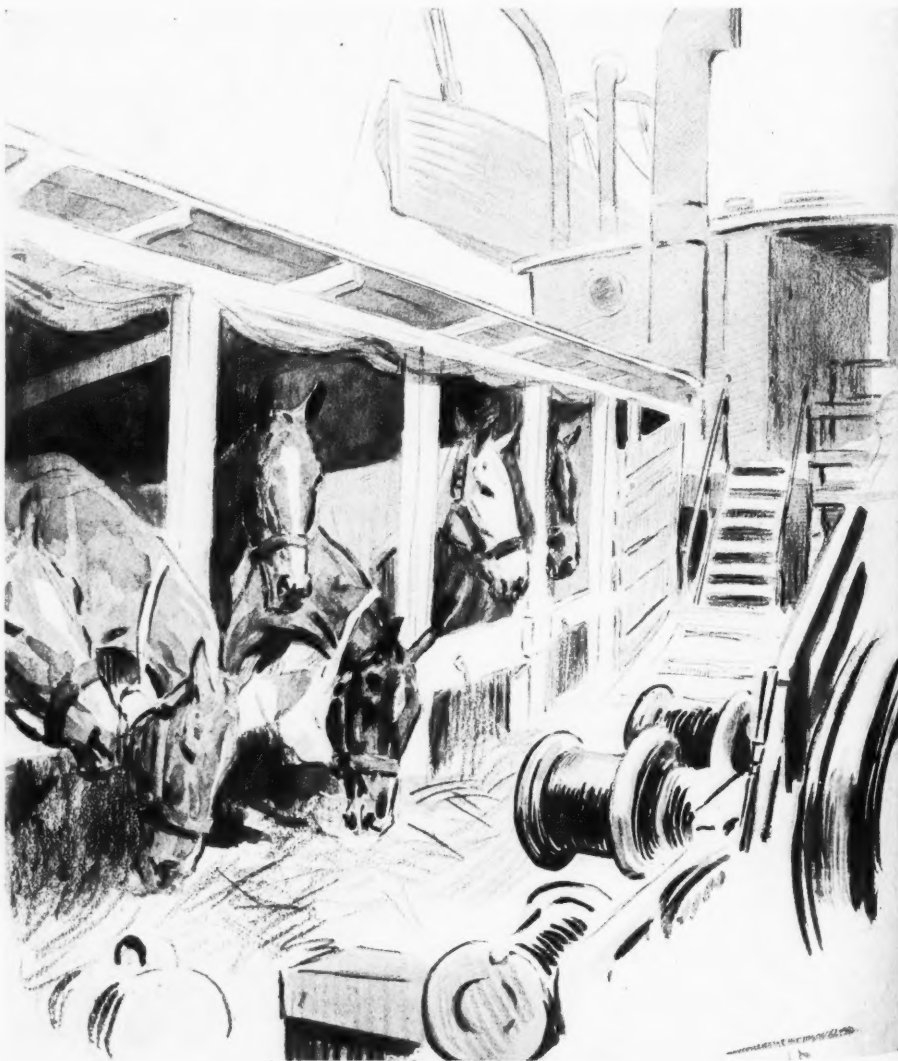
You must believe, therefore, that when the files of threes passed by the Colonel and out of the gate to their unknown destiny they were physically fitted for the ordeal of war so far as conscientious horse-masters and veterinary science could make them. Conscience, we may admit, is an elastic thing, and the few may approve, where fitness is concerned, of staring ribs and soft muscle, without being absolutely conscienceless. Honest endeavour and an ever-present thought for the welfare of those who will later make use of the horses and mules, and sometimes, perhaps, depend on their physical condition for the saving of their own lives and the lives of others, have surely been the guiding thought in approving of their final transfer from England to France, and thence to theatres beyond.

"Fifty light draught horses, twenty-five heavy draught horses, and twenty-five draught mules, all properly branded and shod, Sir," says the squadron leader to the Commandant as he introduces his party for embarkation. So squadron follows squadron, and, as the files of threes lengthen, they make a long winding column which reaches far out on the way to where the big ships are. It is up to the Commandant now to legislate for the armies overseas. The onus is upon him if unfit animals are sent to those battery commanders, cavalry divisions, horse transport, and ammunition columns so urgently needing fit ones. So it may be that now and then a peremptory order to "halt!" breaks in on the slow march past, and the Colonel makes a closer inspection of a cumbersome heavy horse or a shuffling mule. He may be "tucked up," "split up," or rather "dried-up" looking—pretty expressions that mean something not quite compatible with fighting fitness. "Pull him out, and give him a little more time," observes the critic-in-chief, and the "heavy" goes back to the lines to stay awhile yet in Blighty. Some chargers go out, too, and many a thoroughbred has filed past this same spot to do credit to our incomparable breed. Cavalry horses may have their place in the procession, or their turn may be due on the morrow;

and if they have gone to France, they may also have gone further towards the rising sun. For the cavalry have had some chance in the more distant theatres.

So the long line of three hundred or so has been completed, to be followed by another an hour later, and still another after that. With the conducting officer at the head, and each man mounted and leading two horses, they have made a move through the streets to the docks. Each horse has been provided with a canvas nosebag, for use, it may be, on the boat, certainly for use in France. How many tens of thousands, one wonders, have passed along those streets and have filed through those dock gates? How many more will do so? Soon it will be for four years that men, horses, and material have been steadily, hour after hour, day after day, hurried France-wards through those same gates. To meet what fate? People in those streets have long ceased to wonder at the almost daily processions. Familiarity strangely deadens interest. Once they stood to admire the noble outline of the heavy gun horse, and they marvelled at the numbers of field-gun and wagon horses, and the mules in their thousands from across the ocean. They wondered more and more where they could all come from, and how soon it would be before the reservoir had been drained dry. But the processions came up and went by almost day after day, and the people gave up wondering, as being useless and tiresome. Still they are coming and going.

They have finished their last journey on English soil now, and they are tied up in a great dock shed. They may share it with troops detraining and stores awaiting shipment. A skilled veterinary officer is making a final inspection prior to approving them for embarkation. A very few he keeps back. He detects a high temperature and the



READY FOR THE VOYAGE.



beginnings of respiratory trouble. The last three mile walk has developed and made evident what had not been suspected until then. The animal thus attacked must wait for another day. So, also, must one which shows symptoms of skin irritation—anathema, indeed, and feared greatly for its devastating consequences if disregarded. And after these last necessary formalities have been observed they are ready for shipment.

"Mules first," is the order. That is because they are just mules. Outlaws of nature they may be in spite of their tremendous utility and value as aids to the carrying on of modern war, and so they are made to travel steerage as it were. They have to go "below stairs" in the stalls in the dark lower holds. To get there they must descend steep gangways from the main deck. Their descent is necessarily undignified, though, after all, could anything look undignified where no dignity attaches to an animal? The greatest admirer of mules—and who that has worked them in the Army does not admire them?—will not concede dignity to them. They are just mules. They would not be mules did they not show extraordinary shyness and distrust of the water troughs at which they are invited to drink before being led on board. They are thirsty and really want water, but they must think in their queer thinking machines that someone has poisoned the water, and so they will not yield to cajolery to drink. They believe all the world is against them, and they especially do so when they are reminded that they must not spend the rest of their lives looking at the gangway or "brow" before venturing along it from dock to ship. They do not snort or get excited as a horse does when he makes up his mind to "jib" and be unpleasant; they just push hard on their toes in the ground, and refuse to be led any further. Of course, they have to surrender, because there are ways and means, and the war has lasted long enough to convince our English muleteers that the obstreperous mule is not invincible and that a long rope with a breechen to haul on is the "high explosive" with which to gain victory.

In that way our long-eared friends are dragged across the threshold, and thereafter they go without more ado to their quarters below—stumbling, slipping, and sliding, but always avoiding falling. Thus to their quarters and close companionship for twenty-four hours or more. Next come the horses, with the heavy horses as near the top deck as possible, for they want fresh air; and, moreover, the shorter the time they occupy in getting on and off the ship the better. From now until they are landed at a port overseas and handed over to the care of base remount officers it is the duty of the conducting officer and his men to look after their welfare. That officer obviously has responsibility, but it is certainly lightened by the easy way his animals travel, even though the waters of the English Channel are often troubled and unruly.

He also takes certain wise precautions to lessen risks. He is not sparing of water, and he does not feed on hard corn, because he knows that a diet of oats could soon induce colic and other ills of a horse's digestive system. He wisely feeds on hay, and knows, too, that if horses are kept picking and eating slowly they will not get into mischief and be inclined to worry, kick, and bite each other. Then, when the day is drawing in and night comes on to cloak the wonders of the Naval Service and Admiralty transport across those perilous waters, he has the animals tied up short. In that way he reduces the chances of trouble should the crossing be bad.

All night long a strict vigil is kept by the conducting party. True, the horses are not resting, but they are not giving trouble. They are fidgety and nonplussed as if wondering what new, strange destiny awaits them. They

do not settle as resignedly as do the perverse and illogical mules. The latter may have rebelled at embarking, but, once on board, they become the acme of good manners and immaculate behaviour. A ship's hold might have been their home from foalhood. They never heed the steady pulsating throb of the ship's engines. They could not know of the anxious vigil high up on the bridge, in the look-out on the foremast or on the gun platform, or of the sleeping troops covering all the space of the mess decks.

Have you ever thought, one wonders, of these three and a half years of silent, dead-o-night traffic from shore to shore of the English Channel during which hundreds of thousands of war horses have been carried across in safety? of the Remount Service which has brought them together from a far distant land, and is now distributing them again into the battle arenas? Has the average Englishman given more than a passing thought to the wonderful organisation of the Navy which has protected our transports on their ever risky errands? or of those gallant Captains Courageous



DELIGHTED TO GET OFF.

and their splendid crews who have braved for all this time the lurking perils and navigated their ships from safety, through danger with the ever-present chance of disaster, to safety again?

Certainly the Remount Service is conscious of uninterrupted triumph over hidden foes, a triumph which the protecting escort of destroyers and careful navigation in face of extinguished lights have done everything to secure. When you have stood through the night by the side of a Captain Courageous you will have understood something of the nervous and mental strain borne night after night by those who have supported a great burden of responsibility. It is not a time for talk—just quiet deeds and orders given and executed in hushed tones; frequent glances by the Captain in the privacy of his chart-room at the course as laid down in secret Admiralty instructions, observations to port and starboard, and always the hiss of the bow waves as the ship hurries on at full pressure to beat the coming light of day. You can imagine in some small way the tension of the long



looks ahead and abeam, and the always present anxiety to solve the mystery of the darkness. The escorts you know are there, frequently changing their guardian positions, and, when necessary, winking out messages of instruction and extra caution. The thought stiffens your courage and especially when the blessed wireless reads in those disquieting messages of "Government war warnings," of the presence on and under the waters of the vicious enemy. You know that every precaution to save ship and many lives is being taken. Again the thought is comforting. The night may seem long, though, sometimes, not long

enough; for the first grey streaks of dawn are fast paling into another day before the ship is safe, where wind and wave are silent and where danger dares not follow. A little while more and the night's work and strain are over. The gallant destroyers have messaged a "good morning!" and are speeding on their return. The French pilot has been picked up and the ship comes to a brief rest again. That is how an instalment of our vast army of war horses comes to France. They, like the men that stream in day after day, are only just coming to grips with the grim realities of active service.

A. SIDNEY GALTREY.

## BOXING IN THE SERVICES

BY HYLTON CLEAVER.

THERE used to be a popular impression that a boxer was merely a man who would as soon be punched on the nose as not; and many people who, in other matters, would appear to be sensible enough could never understand why any man who, having once entered for a boxing competition, had been painfully knocked about should joyfully enter for another. To-day things are a little different. Scrapping was always the pet game of the Services, and as the Army and the Navy have grown, so also has true understanding of the joys of fisticuffs; for Service boxing is, in many ways, almost a thing apart. This is no myth. Quite recently a Tank Battalion Novices Competition brought 40 per cent. of the rank and file into the ring to battle, not for an individual prize, but for a cup that went to the leading company on points; every man who was willing to box, and who went into the ring to prove it, scored one, and every winner two. And herein lies the secret of the clean, keen play that has made Service boxing the best of any in the world. As a schoolboy fights for his school at Aldershot, so a soldier fights for his regiment, and a sailor for his ship; and the moral backing that comes to the man who is not fighting purely for personal kudos is very great.

One of the strongest arguments against professional pugilism is one that appeals to many men who are themselves keen boxers. It is the foolishly inflated scale of pay that men can receive for fighting even bad fights. Granted that the labourer is worthy of his hire, the fact remains that no twenty round fight of recent years has deserved a purse of £500. One looks back, too, and remembers how many big fights in the last decade have fizzled out and spoilt an evening; and one turns with a certain sense of gratitude to the stirring mills that are fought out at Army and Navy meetings, under Army and Navy rules.

It is not merely coincidence that Service fighting has always been so dour. Those who know can read in the fact a certain significance of the value of Army and Navy rules, and the uplifting atmosphere that spreads habitually over a meeting where every man is fighting for his side. Service rules were made by the Old Contemptibles themselves, and by these rules men only receive a few pounds for their fight; it is a sliding scale and chiefly depends upon each man's ability. Nobody grudges that small emolument, and most of us would as soon see it rather more. There are no fights of over six rounds duration, and in every bout the points are counted by two judges, just as they are in amateur boxing, so that the referee, although he has the casting vote, is virtually left free to devote his attention entirely to the cleanness of the play; and "play" is just the word, for Army boxing is nothing but a cheery game.

There is another little rule that has its due effect. When a man is sent to the boards, the ten seconds granted him are not counted aloud, and an audience does not therefore suffer the unedifying spectacle of a perfectly fresh man stumbling to the floor from a light blow, and patiently staying on his knees till the count of "nine." Since none of us, particularly in moments of excitement, have a very accurate idea of the real period covered by ten seconds, Service boxers go down either to stay down or to jump up quick and lively. And somehow one prefers that way of doing things. Neither the Army nor the Navy has any antagonism whatever for professional boxing; they just have their own idea of the game. In proof of this many of the men who have climbed to the top of the fistic ladder came from the Services, and only fought afterwards in "pukka" professional rings. From these men folk came to know that when a soldier or a sailor was announced to box, the fighting would be good. One cannot remember any boxer who, having won the Army and Navy

Championship, did badly in the professional ring, or shamed the regiment in which he learned the game and under whose colours he still fought.

Some of the finest fighters under this heading come back to memory: the famous Corporal Sunshine; the three Guardsmen, Voyles, Harris and McEnroy; Corporal Darley, who made fame in India; Gunner Hewitt of the Marine Artillery; Private Palmer, Sapper Morgan, and lastly, because one may well consider them the chief, Seaman Hayes and little "Dusty" Miller. We knew Miller best as a mere lance-corporal, and he won his four championships as such in 1910, 1911, 1912 and 1913. He was tremendously popular, partly because of his eternal good humour in the ring, and his odd little habit of flicking his nose with his thumb between exchanges. To-day he is a sergeant and still as clever with his hands, for few men have ever loved the game so honestly as he. It would cheer many of us in these long days if we could but see Seaman Hayes, who won the Navy light weights in 1903, fight Miller once again.

Three times these two men met over a long distance. Miller won twice. In the third fight Hayes stove in a few of Miller's ribs, and "Dusty" will tell you in all sincerity that it was the loveliest fight of his life.

Another great pair were Voyles and McEnroy. Voyles was slightly the better; but when the two came face to face it was Greek meet Greek, and one did see an honest mill, which to a man who loves the science of fisticuffs is vastly more entertaining than a battle of reputations.

The Army in India sent Bombardier Wells, who, considering his ability, was undoubtedly the most astonishing "draw" from a manager's point of view in recent years. No man could demonstrate the classic English style of boxing so cleanly or so skilfully as Wells. In a gymnasium he could convince our soundest judges that he was a real White Hope, and his charming manners and attractive build made him a popular hero at the time when Jack Johnson's bombast was becoming a little tiresome. Yet no man was a more dismal disappointment in the ring. In spite of his many failures, Wells never lost his popularity, which is rather odd, and certainly a compliment to the Bombardier himself.

Gunner Moir, who at one time anybody could punch till they were blue without disturbing, and his contemporary Tiger Smith (who stood left foot first), Private Basham and Corporal Zimmer (both sergeants nowadays), and the two Bandsmen Blake and Rice were probably the best known.

There are certain others who, in the light of recent events, are entitled to be known as soldier boxers; but these are men who, before compulsion had been seriously considered, sacrificed a career which could only be really theirs for the few best years of life to fight in a sterner fashion, without the limelight of the ring, and who have fallen in the cause. Yet one must not think only of those who have been killed, for there comes to memory another case—only one, perhaps, of several.

There was once a man who, after a grim and wearying struggle against adversity and the hardships of the very poor, was coming at last into his own as a boxer when the war gong sounded, and in 1914 he joined the first hundred thousand. He went to France in 1915, just after his best and biggest fight, when he beat a better known man in twenty rounds; and he has been there ever since.

His position is bound to be that of many another who, having donned his khaki, was not, like some, content to stay at home under its camouflage. His name is Patsy Cokely, and though many will soon forget it, maybe he will yet fight in the ring again, and then perhaps others among us will remember.

Those who cannot recall his name will be more likely to remember that of Jerry Delaney, who had the quickest and the most wicked left of any man of his day. Jerry is killed, but he had time to win a Military Medal for gallantry in a sap-head; that was in 1916. In 1915 he won his weight at the 2nd Division's tournament in the theatre at Bethune, where Cokely won both the middles and heavies; and we may think of him, too, as an Army boxer, since the Army came first with him.

But the name of Jerry reminds one of another whose surname is Driscoll, and who is known to nearly every amateur boxer in London. Driscoll won the Navy middles and heavies for four years, and was for a time middle-weight champion of England. He was coach to St. Paul's School, which explains why St. Paul's quite easily holds the palm for boxing victories over the Public Schools.

He taught the men of the Stock Exchange and the Artists Rifles; he was, too, a very strong swimmer, and combined care of the baths with care of the ring at St. Paul's. He is back in the Navy now with his old rank of master-gunner.

One of Jerry Driscoll's best pupils was Captain C. O. Lilly, himself a Pauline. Captain Lilly won the Public School Championship in 1907-8 and, growing older, received his half blue for the game. In 1912 he won the Army light-heavies on behalf of the Dorsetshire Regiment, and in the big fight with Fritz he, not unnaturally, won a D.S.O. as speedily as a man may.

Another great fellow with his fists was Le Q. Martel, once of the Sappers, but now of the Tanks. As a lieutenant he won the welters in 1912 and 1913; while one of the best the Navy turned out was Lieutenant W. M. Nash, who won both middles and heavies in 1909, and the middles in 1911.

One dare not call the roll of all those Service men who fought for our entertainment in the piping days of peace. It is better that we should only remember how they stood up to the guns, that deal only in blows that cripple or kill, with the same slow smile that was on their lips when they pattered around the ring facing men who hit only with padded gloves.

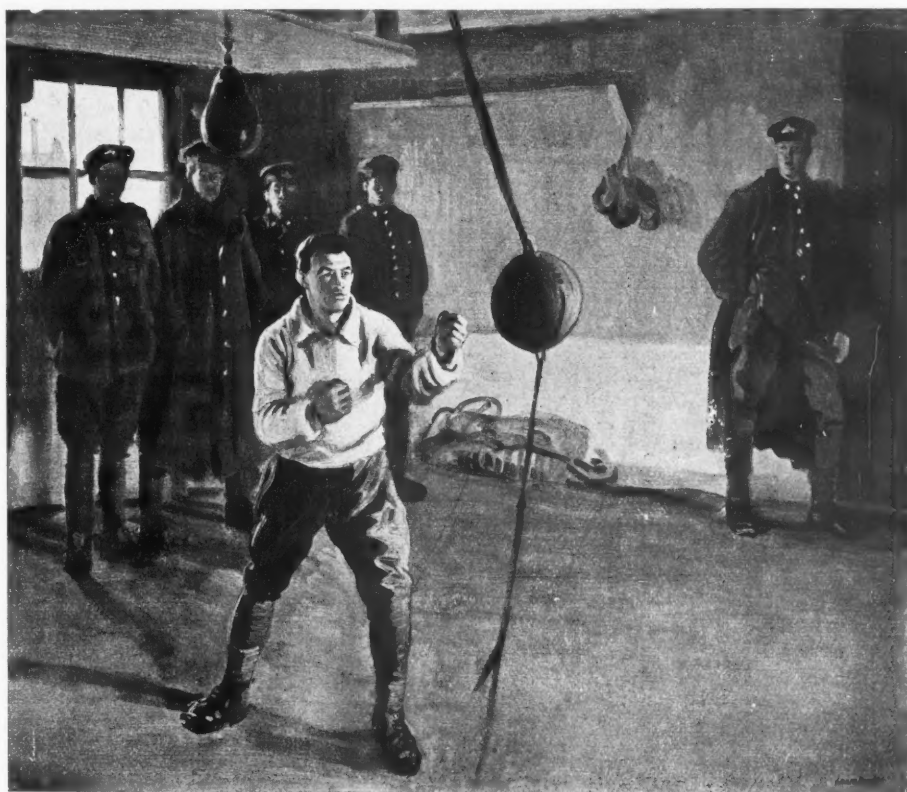
Boxing—pugilism—fisticuffs—call it what you will, is the Service's game, largely because any two men can play it as well on a crowded battleship as they can in a Flanders billet; and not even the man who falls down in a fit in Fleet Street can attract a crowd so swiftly as the prospect of a mill.

Is it to raise cash for the comforts fund?

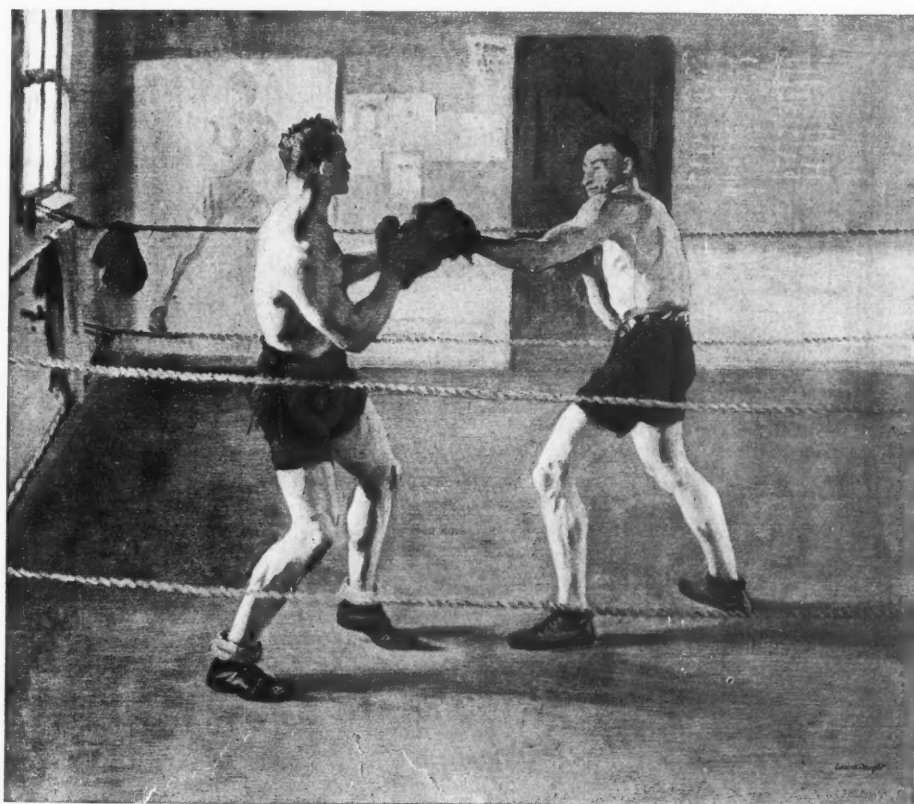
Is it to charm the fancy of mud-weary soldiers or a ship's crew nauseated with the stealth and beastliness of Huns afloat?

Is it to please the High Command by fostering competition so that each section of every unit shall be rivalling the other till the whole force is aglow with keenness and efficiency?

This game will meet the case. Boxing, wherein a man's own fists are the weapons of attack and self-defence, will supply the crying need. No sound can fill a hall so magically



DRIVER JOE SHEARS PUNCHING THE BALL.



DRIVER JOE SHEARS AND CORPORAL W. ATKIN IN THE GYMNASIUM.

as the tap-tapping of feet and padded gloves. It is the most English pastime of all; and so to-day there are gloves, and to spare, wherever our men are gathered together.

[The illustrations accompanying this article are reproductions of pictures from Mrs. Laura Knight's interesting exhibition at the Leicester Galleries, of which a notice was given in our issue of February 9.—ED.]





**L**ORD LEVERHULME'S house at Hampstead—The Hill—is well known not merely to residents of the Northern Heights, but to observant visitors to Hampstead Heath. The stonework of the extensive pergolas in the garden challenges enquiry, not, indeed, from North End Road, by which the house is approached, but from the favourite view point of the Judge's Walk, and from the western portions of the open Heath. Then one is told of the treasure house of fine pictures and works of art to which

these stately gardens belong. The Hill, therefore, has already acquired a certain celebrity and distinction with which no other modern house at Hampstead can vie. With Hampstead's historic houses it does not enter into comparison.

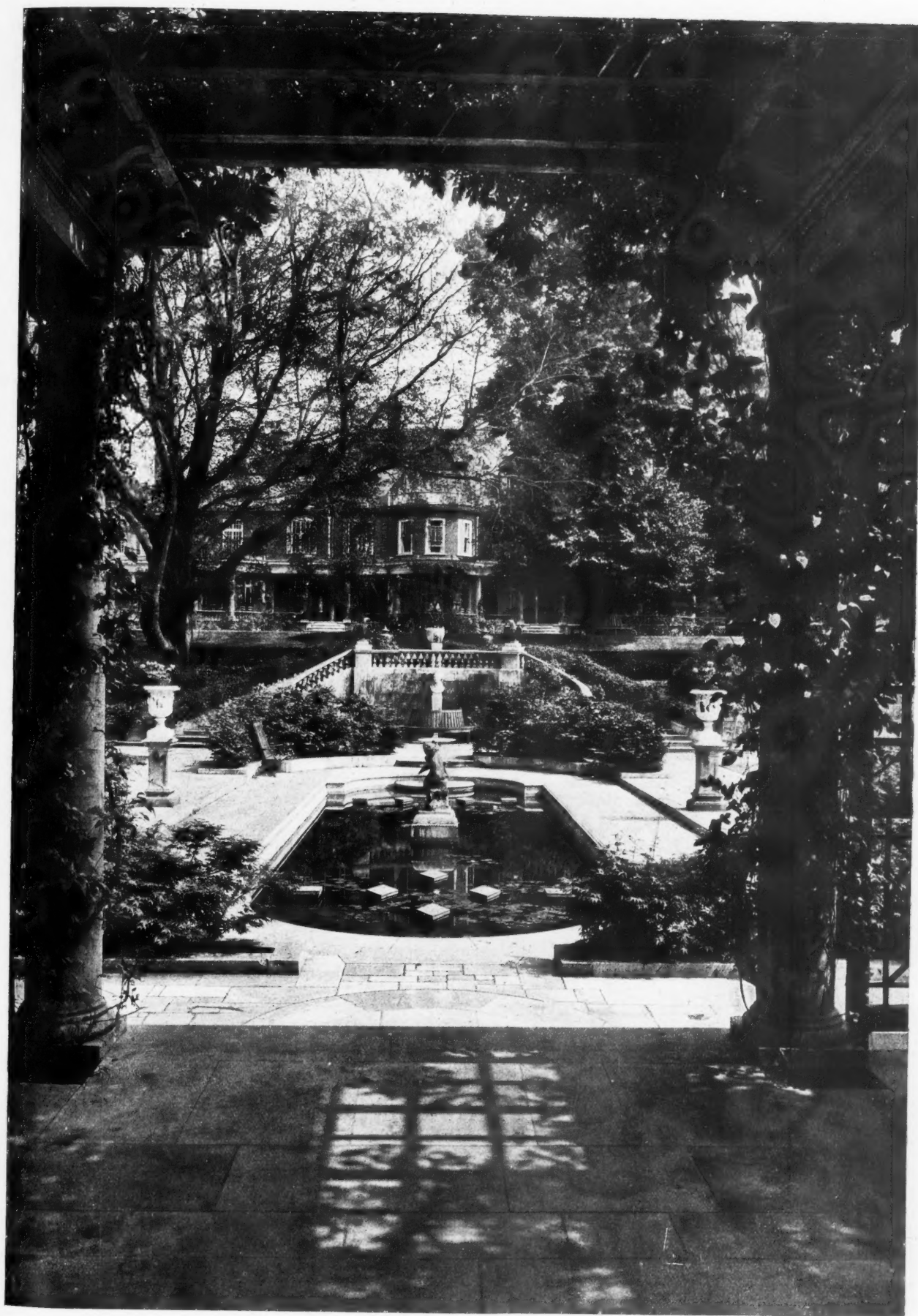
As it stands, it has a history of about twenty years. But its predecessor on the same site also enjoyed its measure of local fame. For the better part of a century it was associated with the well known Hampstead family of the Hoares, who also owned the more important house of Heath Mount

close by, now the residence of Lord Iveagh. The latter, a fine, square-faced Georgian mansion, which still bravely fronts the Heath, was the home of the first Samuel Hoare, the banker, who bought The Hill as a residence for his son, the second Samuel Hoare, on his marriage in 1809 with one of the Gurneys of Norfolk. From 1809 to 1895, when the property was sold, successive generations of Hoares lived at The Hill, and Hampstead and London have good cause to remember the lengthy régime of Mr. John Gurney Hoare who, down to his death in 1875, was always one of the foremost champions of the people's rights to Hampstead Heath against persistent attempts of the Lord of the Manor to assert what he claimed to be his. The old house has entirely gone, the picturesque stables being the last part to make way for a new extension of its successor, and a few fine elms and beeches are the sole survivors of the original garden.

The Hill, though completely rebuilt about twenty years ago, has since been much enlarged by frequent additions. A spacious lounge hall gives access to the drawing-room which, together with the dining-room, takes up most of the garden







Copyright.

THE HILL.

"COUNTRY LIFE."

front. The windows of both rooms open on to a broad flagged veranda with open roof and pillared bays, from which three flights of steps lead down to the upper lawn. The drawing-room is in the Adam style with medallion decorations in the panelled walls and a ceiling and frieze picked out with gold. The mantels are of white, with insets of coloured,

dining-room is panelled high, and its frieze is embellished by shining pewter. Tall Stuart chairs, a plain oak serving table, and three small examples of Van Mieris, Franz Hals and Terburch are its principal features. Out of the dining-room a curving corridor, the walls of which are covered with choice examples of Girtin, Copley, Fielding, Varley, Prout, Cox.



Copyright

THE TERRACE WALK.

"COUNTRY LIFE."

marble. In one half of the double room the furniture is French, in the other English of the painted style of the eighteenth century. Many cabinets and choice pieces of china have a place in this room; but the lover of water-colours will have no eyes for anything but the exquisite David Coxes, De Windts and Turners which adorn the walls. The adjoining

Tom Collier and W. Hunt, leads to the music-room. This is the largest and most important room of The Hill, and forms a garden wing at right-angles to the body of the house. It has height and dignity, and is wainscoted in cedar wood, the panels being richly festooned with clusters and trails of fruit and flowers in the style of Gibbons. The doors and the





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ON THE TERRACE.

"COUNTRY LIFE."

pediments above them show the same elaborate treatment, and the room is chiefly lighted from above.

In subsequent articles it is intended to deal in detail with the pictures and the furniture of The Hill; in this place it is enough to say that the pictures in the music-room chiefly consist of examples of the English School of the eighteenth and early nineteenth centuries. Here are several canvases

of such masters as Gainsborough, Hoppner, Romney, Raeburn, Reynolds, Lawrence, Morland, and Cotes. Turner is represented by a small "Odysseus and Polyphemus," Linnell by his "Arcadian Shepherds," and Constable by one of his many pictures of "Hampstead Heath." As for the furniture, fine eighteenth century chairs and couches, not in single specimens, but in full sets, are arranged in rows down the



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A PERGOLA WALK.

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THE COVERED PERGOLA

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THE LOGGIA.

"COUNTRY LIFE."



middle of the room. There are many side-tables, and blue china in profusion which would have made Rossetti covetous.

The music room, as has been said, forms the right garden wing of The Hill, and, crossing the lawn to the parallel wing, which is considerably lower in elevation and not uniform in style, we enter the delightful Stuart Room. Here the oak paneling and stone fireplace are old; the walls are adorned with choice old needlework pictures and Stuart mirrors, and the cabinets of marquetry and red and black Japanese lacquer are exquisite examples of their kind. The room is lit by electric candles in four brass pendant sconces. From this room one passes into the domed China Room, where the finest things are Leighton's "Garden of the Hesperides," Millais' "Idyll of 1745" and Byam Shaw's "Adam and Eve." The room is hardly more than a vestibule, and so is the next, where the eye greets with delighted recognition Orchardson's "Young Duke," Millais' "Black Brunswicker" and Solomon's "Judgment of Paris." The May morning beauty of Venus under the apple blossom is one of the most radiantly lovely things at The Hill, though here is no Greek goddess, but merely a fair English maid. In the next room—also a passage-way—are to be seen Millais' intensely pre-Raphaelite "Sir Isumbras at the Ford," which the critics ridiculed so mercilessly, and examples of Rossetti and Burne Jones. One other room remains—the Red Room—built on the site of the stable of the earlier house, and here, too, it is the beauty on the walls which draws us, the charm of the little Boningtons, the magic of the small Constables. But of these and other treasures which Lord Leverhulme has amassed with surprising catholicity of taste and sureness of judgment full recognition will be made in later articles.

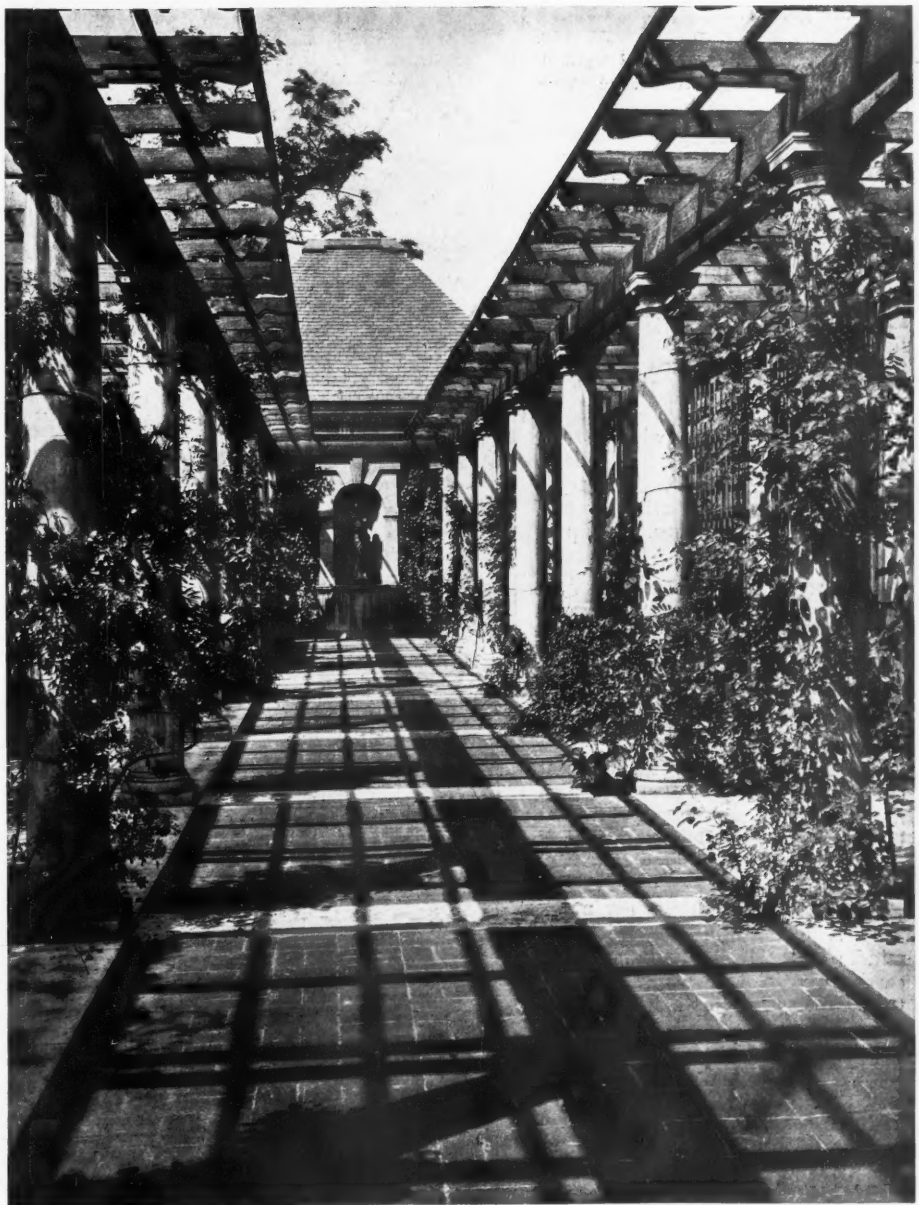
And now let us see the garden—one of the most interesting and ambitious examples of the modern art of garden craft, certainly in the neighbourhood of London, where space is so rigorously circumscribed. It is not yet completed, and cannot be until the war is over, and it is impossible, therefore, to pass any final judgment upon Mr. Mawson's unfinished work. Lord Leverhulme is throwing into his own grounds all the land on which stood the neighbouring house of Heath Lodge, and as a public way ran between the two



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THE EAGLE STEPS.

'COUNTRY LIFE.'



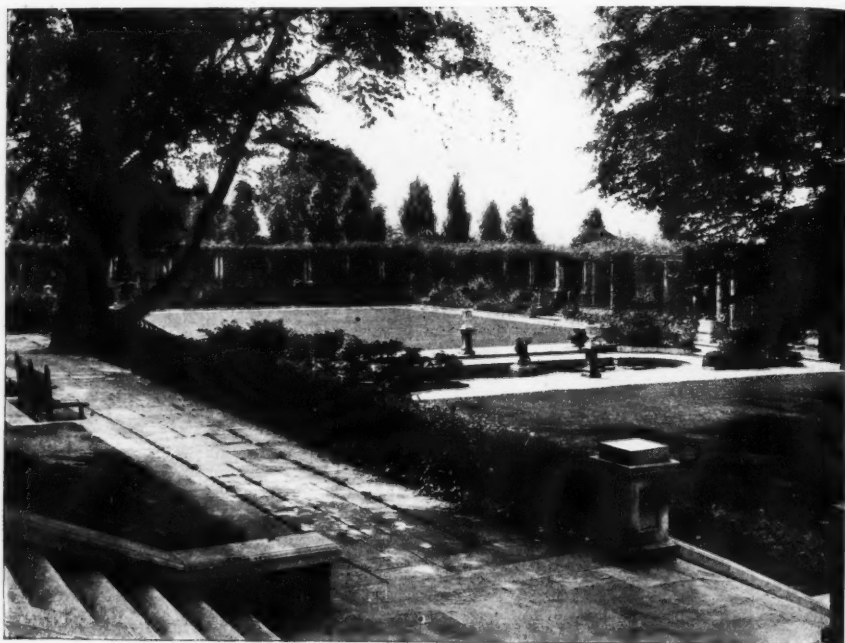
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THE RAISED TERRACE.

'COUNTRY LIFE.'

properties it was necessary to link them together by means of a bridge, and bridges are notoriously difficult things to fit into garden design, especially when public authority insists that the erection shall be of a temporary character. It is necessary to bear this limitation in mind when considering the bridge and raised terrace which lead from one garden to the other. Nor was this by any means the only difficulty which had to be overcome. The old garden of The Hill was very much overlooked from part of the adjoining Heath. There was also a sharp slope to be dealt with, because Lord Leverhulme desired to have sufficient level lawn on which to entertain large numbers of people. On the other hand, whatever design was decided upon, it was obviously an essential condition to preserve without interruption the glorious western view towards Harrow and Windsor. Such were the conditions, and the illustrations will best show with what skill and ingenuity the difficulties were overcome.

The old garden had been quite simple. Below the terrace there was a narrow belt of level lawn, and then from the irregular row of forest trees the ground fell in an uneven slope down to the public way, the whole garden being bordered with a gravel walk, which wound between banks and beds of rhododendrons and other flowering shrubs. *Simplex munditiis*—it was doubtless very charming in its way, and the big trees, which were its most conspicuous beauty, have been carefully preserved to grace its more splendid successor. The upper lawn between the two garden wings has been left as it was. From it a grassy bank slopes down to a flagged terrace, on the other side of which is a low hedge above a graceful Italian garden surrounded on two sides by a broad raised terrace with closely screened pergola of stone pillars. The fourth side is left in a natural state, and the path is carried through pleasing clusters of trees. The pergolas are the feature of the garden at The Hill which impress themselves most upon the mind of the visitor. They admirably serve their purpose as a screen from the adjoining Heath, and the lower garden is thus rendered absolutely private, while the view from above remains unobstructed. The open terrace walk is one of the happiest conceptions of the garden, and nothing could be more graceful than the design of the horseshoe stair midway, with curving balustrade and upper piers ornamented with eagles, which leads down to the lily pond. This is exactly in line with the middle of the house, and the eye is carried most cleverly across the pond to the pergola temple beyond and the vista of the steps of the bridge inviting to further beauty out of sight. In the curve of the stairway is a single bust of classical design, and the centre of the level garden is occupied by the lily pond and its broad margins of white stone, with classic vases on either side. The pond has curious stepping-stones and in the centre a successful piece of



Copyright.

THE WATER GARDEN.

"COUNTRY LIFE"



sculpture, a laughing boy struggling with a dolphin, by Mr. Derwent Wood. The garden statuary is of a somewhat mixed order, but most of the figures are classic.

If we pass through the pergola temple and cross the stone bridge over the public way we come to another long terrace pergola, terminated at the far end by a stone pavilion. Undeniably there is a certain monotony in this long terrace, which is, perhaps, the least successful part of the design, though, as has been said, the conditions imposed severe limitations upon the designer, for the public heath is here close at hand. This stone pavilion is an elaborate structure, such as the Younger Pliny would have loved to describe in the minutest detail, and in it he would certainly have kept his books and writing tablets wherewith to cultivate the muse. For, from the further side of this Belvedere there stretches an exquisite view over the Heath to the spire of distant Harrow, and tradition says that even the flagstaff of Windsor Castle is visible when conditions of light and air are in most favourable conjunction. If Lord Leverhulme were inclined to follow the old practice of setting up poetical inscriptions in stone in praise of the beauty of the surrounding

scene, he might not inaptly choose the delightful sonnet on Hampstead which Leigh Hunt wrote when languishing in gaol in 1814 for his fierce invective against the Prince Regent:

They tell me, when my tongue grows warm on thee,  
Dear gentle hill, with tresses green and bright,  
That thou art wanting in the finishing sight,  
Sweetest of all for summer eyes to see;  
That whatso'er thy charm of tower and tree,  
Of dell wrapped in, or airy-viewing height,  
No water breaks from out thy face with light,  
Or waits upon thy walks refreshfully.  
It may be so—casual though pond or brook—  
Yet not to me so full of all that's fair,  
Though fruit-embowered, with lingering sun between,  
Were the divinest fount in Fancy's nook,  
In which the Nymphs sit tying up their hair,  
Their white backs glistening thro' the myrtles green.

There is no more lovely view to be had near London than this spacious prospect from the summer-house of The Hill. F.

## IN THE GARDEN

### THE SPRING SNOWFLAKE.

IT is one of the pleasant surprises of February to see a carpet of Snowflakes under the bare stems of trees or shrubs in some out of the way part of a woodland. The Spring Snowflake makes a delightful picture when naturalised in groups under Hazel bushes, for the flowers of one and the catkins of the other are invariably out together. It also looks well in company with those weird-looking and beautiful shrubs the Witch Hazels, now flowering with unusual freedom. The Spring Snowflake is known botanically as *Leucojum vernum*, and in many ways it resembles the Snowdrop, to which it is closely allied. It is one of the joys of the garden at this time of the year, and yet how seldom it is seen. When naturalised the Spring Snowflake is wonderfully effective, and in suitable soils seedlings spring up around the parent clumps. The drooping white flowers are usually solitary, but sometimes borne in pairs about 8 ins. from the ground. When we come to examine them more closely we see how beautiful they are in detail. They are fragrant, and each flower segment is tipped with a pretty green spot.

The bulbs, when obtainable in sufficient quantity, should be planted in the autumn like any other spring flowering bulb; but the following incident is not without interest, while it may be regarded as evidence of the hardiness and good nature of the Spring Snowflake. One cold February day, a few years ago, a schoolboy who had found the Spring Snowflake flowering in a wood, dug up a clump of it and brought it to me to name. I felt sorry for the fragile-looking plants that had fallen to this fate, and straightway dug a deep hole in a rocky bank and covered their naked bulbs and stems with leafy mould. Each year since I have been rewarded with a few flowers, and the bulbs slowly spreading are now able to take care of themselves.

There is a closely allied species known as the Summer Snowflake (*L. aestivum*) which grows wild on the banks of the Thames near Oxford. The flowers have been sold in the streets of Oxford in abundance, like those of the Snake's-head Fritillary, which is also common in the meadows there. Both of these flowers are far too precious to be gathered recklessly, and the sale of wild flowers should be discouraged. The Spring Snowflake once grew wild in Oxfordshire, but it is now extinct.

### POTATO GROWING.

**Spring Work in Seed and Planting.**—The lecture given recently by Mr. W. Cuthbertson, V.M.H., in the Mansion House, London, was full of sound and practical advice which, if followed, would lead to a greatly increased yield in the Potato crop. His advice on planting was to the point, and we cannot do better than give it in his own words: "I do not ever believe in planting with a dibber. My way when planting on a small scale is to set a line across the patch and with a spade take out a trench or opening in the shape of a V but with one side straight

—3 ins. to 4 ins. deep. Along the bottom of this sprinkle a little good artificial manure; 2oz. to the running yard will be enough. If you have any old potting soil or wood ashes, or leaf mould, make the trench a little deeper and spread it along the bottom. Lay the sets in carefully along the bottom, sprouts upwards, giving the tuber a gentle press into the soil. Push back the soil taken out and restore the level surface, thus leaving the sets covered with 2 ins. to 3 ins. of soil."

**"Once grown Seed."**—Mr. Cuthbertson stated that it was not necessary to purchase all the seed Potatoes required each year. When Potatoes are grown from Scotch or Irish seed it was recommended to dig up a number of roots in the summer or early autumn before they are ripe, and to allow the tubers to lie on the ground for a few days to become green, and then put them away in boxes to be kept for seed next year. This is known as "once-grown seed," which, if properly handled, should give as good a crop in the second year as the first; but after that the virtue of their origin seems to have gone.

The lecturer went so far as to recommend filling one half or three quarters of the Potato land with once-grown seed and buying every year from Scotland or Ireland as much fresh seed as will plant the other half

or quarter of the land, and then saving as many tubers from it as will plant a half or three quarters of the ground the following year. By this means it would be a simple matter to experiment as to the suitability of a few of the lesser known varieties. Suppose, for instance, one purchases 14 lb. of Scotch seed of a good variety and it costs 4s., including carriage, the produce ought to give at least 1 cwt. of tubers suitable for seed, besides a lot of "lumpers" and "chats." To produce seed-sized tubers it was advised that they be planted closer together than usual. H. C.



SPRING SNOWFLAKES ON A ROCKY BANK.

## ENGLISH FURNITURE IN SIR GEORGE DONALDSON'S COLLECTION.—III

BY PERCY MACQUOID.

THE marqueterie furniture in this collection is of especial merit, extending in date for over a century, and very remarkable pieces of about 1680 with fine examples of the next forty years can be seen in interesting conjunction with George III revivals of this lively and fascinating branch

of decoration. Mid-seventeenth century marqueterie is recognised by geometrical motives and sudden contrasts of tone in the various woods, ivory and mother-o'-pearl employed, with practically no attempt at polychrome. It was due to the French influence of the Boulles, Gauderon and Golle



FIG. 1.—WALNUT TABLE with S scroll legs and X stretcher, closely inlaid with yellow and brown coloured woods, a few jasmine flowers and green leaves in ivory. Length, 3ft. 9ins. ; width, 2ft. 2ins. ; height, 2ft. 6ins. Circa 1686.



FIG. 2.—TOP OF TABLE.



that the brilliant marqueterie of Charles II's court obtained prominence here. Pierre Golle, the celebrated "Marqueteur and Ebeniste" to Louis XIV, received from this King 25,000

intermixed with white ivory jasmine and green ivory leaves, generally springing from swirling acanthus scrolls shaded with lines in purples and browns. It is a mistake to suppose these

fanciful fashions originated in Holland, as France was the source of inspiration for marqueterie and practically for every other artistic novelty at this time. Bright colours and rather isolated large flowers were soon superseded by quieter tones and closer blooms, and towards the end of the reign of Charles II the whole arrangement became more crowded. The design on the table top (Fig. 2) shows this change; the lines are full of richness and movement. The central motive from which all the flowers spring, composed of broad waving sprays with acanthus tips, is very characteristic of this date; in the extreme right-hand corner can be seen a spray of the ivory jasmine. The greater part of the inlay is of stained pear and apple wood on a walnut ground, and the design of the flowers is nowhere repeated. The legs (Fig. 1) are of S form, finely scrolled and connected with an X stretcher; they are inlaid on three sides with the same flowers that decorate the frame. This floral picture of marqueterie, entirely covering table tops, is rather later in date than the more geometrical treatment of the oval centre and its four strappings, each compartment containing a bunch of flowers. The hall marks on the silver table at Knole prove that S legs were fashionable in 1680, but as these occur on a stand to a cabinet dated in the marqueterie 1692 and are found even as late as 1700, their fashion must have existed for over twenty years. It is only by the occasional and rare chance of finding a piece with an inlaid date that this marqueterie can be arranged in its correct order of sequence. The clock belonging to the Grocers' Company,



FIG. 3.—COMMUNE in the French taste with serpentine front and sides all veneered with coloured woods and representations of musical instruments on the top and doors, which are edged with a plain banding of brass. Length, 4ft. 9ins.; height, 2ft. 10½ins.; depth, 1ft. 11ins. Circa 1760.



FIG. 4.—COMMUNE of highest quality in the French taste, with finely chased ormolu mounts, the front and sides inlaid with bouquets of flowers, and some bars of music and musical instruments on the top. Probably made by Thomas Chippendale. Circa 1755.

livres (about £6,000 present currency) for two cabinets enriched with ebony, marqueterie and brass mounts. England soon followed suit in adopting the fashion of birds and flowers

dated 1683 ("History of English Furniture: Age of Walnut," Fig. 43), formed a decisive date in this matter; until then large flowered and coloured marqueterie had been assigned by

museums and dealers to the reign of Anne, and the fine watch-spring or seaweed variety produced towards the end of the seventeenth century and during the reigns of Anne and early George I had been attributed to the days of Charles II.

Occasionally other methods of dating this marqueterie can be taken advantage of. For instance, the very large and handsome wardrobe or clothes cabinet (Fig. 6) can be dated almost to a definite year. This fine specimen at one time formed part of the furniture to the Admiralty at Whitehall. It can be clearly seen that the marqueterie of the pediment centres in a Royal Crown, swords of office, and an anchor. In 1684 the Duke of York, afterwards James II, was re-established in his former pre-eminence; he had been excluded from the office of Lord High Admiral in 1674 (a date too early for the fashion of this cabinet). Charles II, in replacing the whole business of the Admiralty under the control of his brother, in order to shield him from the penalties enacted by the test act, exercised the office himself, signing all those papers to which the signature of the Lord High Admiral was required, and the insignia on the pediment probably marks this interesting event. The intricate inlay throughout is of varied browns and yellows on an ebony ground; the pilasters on either side of the doors, with their inlaid composite capitals, are profusely inlaid inside and out, cleverly representing in a marqueterie of flowers and cupids the applied twists so often found on these cupboards; the stand contains three drawers and an arcade resting upon ball feet. Marqueterie of this particular character was not of long duration; a smaller and more arabesque type gradually intermingled itself among the others, till it finally monopolised the entire design. Whether the large sprays of acanthus and flowers were thought too obtrusive in view of the quieter taste then asserting itself, or whether the new and more minute inlay of brass and tortoiseshell with which the Boules were attracting Paris suggested this change in scale, cannot be definitely proved; but one thing is certain, the change again did not emanate from Holland. Many fine pieces of this third period occur in Sir George Donaldson's museum, among them the writing bureau (Fig. 5). Here the design exactly fills the different sized spaces with practically the same detail without ever repeating itself. The leading lines are doubled, with a space between them, in order to give a core to the design that in a vague manner resembles some delicate seaweed growth. This style was carried out dark upon light and *vice versa*, one cutting sufficing for two or more pieces, and several tones, even black, being occasionally introduced; in this table the centre compartment opens as a cupboard and the legs swing out, forming supports to carry the writing flap; the feet resemble those of the last specimen.

The serious introduction of mahogany circa 1718 caused a long interregnum for marqueterie, but which was once again introduced after the middle of the century by Chippendale, Adam and their various followers. The former master at first imitated contemporary French inlay with the admirable results seen on the two fine commodes (Figs. 3 and 4). The general effect of the inlay is that the ornaments and flowers assimilate more nearly in tone with the background than in late Stuart marqueterie, the sprays being less conventional and a greater variety of delicate colours being



FIG. 5.—WALNUT WRITING TABLE with drawers and central cupboard, inlaid with pear and holly woods. The front legs swing forward to support the flap. The marqueterie is very fine and close. Length, 2ft. 10ins.; height, 3ft.; width, 1ft. 2ins. Circa 1700.



FIG. 6.—WARDROBE OR HANGING CUPBOARD on a stand with drawers entirely inlaid with holly and brown woods on ebony ground, insides of doors being decorated in a similar manner. The elaborate pediment bears the insignia of a Royal crown, anchor and swords of office. Length, 6ft. 3ins.; height, 8ft.; depth, 1ft. 10ins. Circa 1684-5.



employed. The brass mountings that generally furnish these commodes, although not cast and chased with the same care and finish found on contemporary French work, are always of well considered proportion and broad in detail. So excellent is the design, inlay, veneer and general craftsmanship of this English marqueterie made between 1750 and 1765, that it at times rivals the works of Duperron, Riesener, Eben and other French makers.

It is certain that Chippendale sold this particular style even as late as 1770, as a commode of similar workmanship is in the possession of Lord St. Oswald at Nostell Priory, made for his ancestor Sir Rowland Winn, and invoiced to him in Chippendale's

writing on December 22nd, 1770, as follows: "To a large antique commode very curiously inlaid with various fine woods, with folding doors and drawers within, and very rich chased Brass ornaments complete. £40." The word "antique" probably means that the commode was old-fashioned by the side of other novelties that Chippendale and Adam in combination were offering to the public in 1770. Another and almost similar piece exists at Hatfield, the brass mountings being from the same castings as those at Nostell. Fig. 3 is almost equal in quality to Fig. 4, but is inlaid with rather more brilliantly coloured woods and is a few years later in date. Both these commodes are very remarkable in colour, quality and execution.

## LITERATURE

### A NEUTRAL ON THE ENGLISH SOLDIER

**D**URING the war we have been bombarded with books of British origin, and next to them in number must probably be placed German books, of which considerable numbers have been smuggled to this country and published. But comparatively few neutrals have committed their impressions to the printed page. Among the exceptions must be placed the works of Gomez Carrillo, the last of which is translated under the title of *In the Heart of the Tragedy* (Hodder and Stoughton). Enrique Gomez Carrillo is a Spanish author and journalist who has won fame in his own country as one of the light infantry of the pen. The book before us is the result of a tour along the British front and a visit to London. It is bright, intelligent and easily read, full of good humour and penetration. One of the notable chapters is that in which the author discusses *The Perplexing Mystery of the English Soul*. He effectively contrasts the bearing of German with that of English recruits. Of the Prussians at drill he says:

They one and all tremble, one and all wait in terror for the cries of command. The faces of all of them indicate humility and fear. When the fist of the officer in command comes down hard upon the head of one of the new recruits, the others, far from being indignant, remain motionless, in stony attitudes. Clearly, they are convinced that nothing in the world is more natural than the brutality of the divine *Feldwebel*.

This is discipline in actual practice and, as our author observes, would not be possible in England. The difference mainly lies in this, that the German subject as a rule is 'pacific' in character. It is the German Empire which wills and carries out war. But in England the very opposite is the case. The Englishman, the Scot and the Irishman have all a certain combative ferment in the blood, and their most popular sports, such as football, cricket and boxing, contain an element of rivalry and danger. A dispute in a London bar usually ends in a fight, whereas in Berlin it would only lead to immense argument. Here is a picture of English soldiers at drill which may be set beside that of the Prussians:

A few minutes ago we were watching some Tommies—mere boys—drilling in a farmyard. They were commanded by an athletic-looking officer. The orders were short, the movements sharp, the whole result rhythmical. Yet one or two newcomers persistently failed to understand the word of command. The commander came up to each of them and said something to them that provoked smiles instead of terror.

It is a question to which no definite answer has been given. Which nation is likely to produce the more formidable army? Individually the British soldier is superior to the enemy, but in mass formation the comparison is not so favourable to us. A minor point is that, although the chivalry of the British soldier is supreme and unquestioned, his sternness is equally unmistakable. As M. Gomez Carrillo writes:

The curious and characteristic thing is that in the English system chivalry is not always accompanied by pity, as it is with French courtesy. No; spies, plunderers of villages, murderers of the wounded have good cause to know it. In a case where any repentance is shown, there is some hope of pardon from the officers of Joffre. With the officers of Lord Kitchener, execution follows the crime without any hope of escape. Bayard, after having shown his passion, is yet capable of pity. The English knight never loses his temper; but he never pardons, either. Fair play—yes; but play that involves making a fool of oneself—no.

Yet it has been impossible to trace in the British any of that hatred which inspires the Hun. Our author remarks the "smiling detachment" with which all but recruiting sergeants and politicians regard the tragic phases of the contest. A final comment on all this runs as follows:

When we are surprised that the hatred of Germany is only met by a sort of chivalrous gallantry, we do not reflect that even now the free citizen of

Britain is, as it were, rubbing his eyes without bringing himself to understand that the actual struggle is not a Colonial campaign, but a fight to the death. And when we are disconcerted at the frivolous tone of some of the great writers in London, we lose sight of the fact that, even in the midst of tragedy, this people demands an exercise for the sense of humour it possesses.

There is a fine chapter on the English and the German prisoners. Those in this country, as in France, are treated just as well as our own soldiers. The sense of pity which does not find expression in the treatment of spies comes very actively into play when it is a matter of the captives and prisoners who are helpless and in our hands.

In battle, what our Spanish critic observes is the tranquillity of our soldiers.

Let come what may, the general calm is absolute. The discipline that moves them seems to be a sort of ritual. Before the battle, they wash, brush themselves and comb themselves. After the battle, they comb themselves, brush themselves and wash again. There is something automatic in the general impression that results.

The English Tommy at the back of the front and in the trenches is silent, but he is the most cheerful of all fighters, and his gaiety seems to increase with the excitement of danger. The puzzle of our critic arises from the contradiction which the war has brought to light.

The military theorists in London and Paris have laid it down as a principle that while the Frenchman is superior in the attack, the Englishman is best at a stand. Verdun, where the French made a stand, and Loos, where we attacked, knock that theory to pieces. In reality, both countries are at heart equally admirable, each in its own distinct and different way.

Signor Carrillo has made a special study of the English officers and his description of them is so excellent that it must justify a rather long quotation:

Dressed with refined but sober elegance, these officers seem rather prepared for a garden party than for a battle. Everything about them appears to be new, from their caps to their neat leather leggings. They use a little light cane instead of a useless and awkward sword. The lapels of their coats show their immaculate collars, and their neat silk ties. An infinite care for personal cleanliness—a care that in Spain would even be called effeminate—is shown by their white hands, their polished nails, their carefully shaven faces, and their hair divided by an immaculate parting. And yet there is such an air of energy, of readiness, and of manly health in the result, that it is really impossible not to admire in them the perfect type of the man of action, capable of any sort of deed of daring, or of any kind of effort. Their exquisite courtesy, their careful elegance, do not prevent them from sharing and even seeking the fatigues of their men. Even the French, who have a tradition of military democracy in the veins, are surprised on the roads of Flanders to see the English Colonels and Generals marching along on foot, knapsacks on shoulders, at the head of their men.

In confirmation of this account it is noticed that in the hottest fighting, even according to the Germans, the British officer is as calm and as careful of his appearance, as correct in his courtesy as he is in a quiet dining-room. Above all, he says:

they are "gentlemen"—that is the ideal common to them all. For it must be understood that the attitude and behaviour of a gentleman are no longer, as in times past, signs of an aristocracy or privileges of a caste, but rather a national gift, to which all can aspire who have the good luck to be well educated. In the Army, especially, even when an officer rises from the ranks, he can afterwards acquire the qualities that mark out the man of breeding. There is something in the moral discipline of the British officer which can be rightly compared with the old laws of chivalry, or with the customs of Japanese Samurai.

It may be that our Spanish critic is to our faults a little blind, but it will not be gainsayed that he has on the whole conveyed a very accurate impression of the British Army and the British soldiers. There are few pages in the book where you will not look in vain for some original observation. For instance, it is rather the fashion to talk as though there was

a great difference between the citizen in khaki and officers of the old type. But it is pointed out that in pre-war days comparatively few men chose the Army as a profession merely because of the attraction exercised by the science of war. We belong to an adventurous race, and the younger sons of our great families delight in a profession which leads to travel, to much riding, to polo and the other pursuits associated with the Army. What is meant is that they are sportsmen first and soldiers afterwards. In a sense, they, too, are citizens in khaki. But the great question will not be solved until the end of the war. It is whether the iron discipline of a nation like Germany, which has had its attention concentrated on war for fifty years at least, and probably many more, will in the end prove as brave and tenacious and skilful in the field as those who have been brought up in freedom with no notion of war drilled into them and no ideals nourished on World Empire or Downfall.

**The Revolt in Arabia**, by Dr. C. Snovck Hurgonje. (Putnam, 4s.) "HURGRONJE," says Hogarth, "is the only European, except, perhaps, Burckhardt, who has seen the life of the oldest city in Arabia under normal conditions; and this fact, added to his command of Arabic and profound acquaintance with native authorities upon the history of the Hijaz, makes his book on Mecca of special interest." Dr. Hurgonje landed at Jidda in 1885, spent five months perfecting his Arabic; then going up to Mecca, he spent another five months studying Meccan society in its normal life, between the departure and arrival of the pilgrimage. So much for Hurgonje's early training in things Arabian, and the reason why he is able to speak with authority on matters relating to the much-worn question of the Caliphate. This small book is written with a great object. It is no less than that of informing the general public of the political significance of the Shereef of Mecca, and, incidentally, of the importance of the Caliphate. There are few parts of the globe about which the ordinary student of international affairs knows so little as he does about Arabia and Mecca; while the question of the Caliphate and all it entails is a problem about which the most learned Orientalists differ. The question of priority between the Shereef of Mecca and the Caliph originated in the earliest days of Islam. Mecca was considered too remote for a seat of government even before the Islamic world extended beyond the bounds of Arabia. But when Persia, Syria, Egypt, North Africa and Spain were embraced, the seat of the Caliphate shifted to Damascus and later to Baghdad. Still, Mecca had that which Baghdad, Damascus and Stambul could never attain. It was, in the eyes of the faithful, the centre of the world, where Adam and Eve first evolved, where Abraham founded the "Kaba"—the house of God—and whither all Moslems must go once in their lifetime. Result: when the Empire of Islam broke up—"the holiest, the least productive and most difficult to rule portion of the Moslem Empire was practically given over to confusion." Out of this chaos was born the Shereefate; the holy places became the personal domain of the descendants of the Prophet. "From 1200 A.D. to the present time one line of these children of Ali, that of Katada, has succeeded in maintaining supremacy in Mecca. The question of the Turkish domination of the Holy Cities did not appear before 1517, when the Sultan Selim conquered Egypt and took over the "protectorate" of Hijaz. Hence the claim to the title of "Caliph," which is no claim at all, for it is obligatory for a Caliph to be able to trace his descent from the line of Koreish—Mahommed's line. This pretension has never been generally approved, but, on the other hand, it has never, until quite recently, excited violent opposition when, under German intrigue, there was an attempted renaissance of the Caliphate and its old powers. It proclaimed a "Jihad" and utterly failed; showing thereby that the whole idea of the Caliphate is at odds with modern international relationship. "A Caliphate, no matter who holds the dignity, is wholly incompatible with modern political conditions. And this will be as true after the present war as it was before. Only as an empty title can it be tolerated at all." This is the opinion of the learned Dutch Arabist, who is probably the closest student of Islam in the world. His opinion should be paid attention to by those who are saddled with the responsibility of "reconstruction" in the Near East.

**Nine Tales**, by Hugh de Selincourt. (Nisbet, 5s.) ANYONE who wishes for tales of action must go elsewhere; these are of the kind that illustrate different psychological states and represent a certain side of modern thought. They preach the gospel of joy and brightness and physical activity as the goal of life. To such as hold these views, life means enjoyment, just as self-control means physical fitness. Sacrifice and discipline are, for them, senseless shackles worthy to be scrapped with other fetishes of the superstitious Middle Ages. Mr. de Selincourt's ideal hero is the parson who says: "It's just joy I shall preach, in the pulpit, and in my life, and always." And he then goes to live with the woman he loves but cannot marry. Then the Bishop comes to inhibit him, and tells him (a strange Bishop this indeed!), "There's only one thing more sacred than religion; and that is Life itself." Yes—but—

**Number Seven Brick Row**, by W. Riley. (Herbert Jenkins, 5s.)—This is a pleasant story mainly about persons in humble positions, but written with charm and humour. It tells the adventures of a friendless lad, Sam Munday; and a Mrs. Tickle, who, poor enough herself, holds out a helping hand to others, is the originator of much quaint and healthy comment upon life and living, somewhat after the manner of the immortal Mrs. Wiggs of the Cabbage Patch.

**The Guest**, by G. Colmore. (Arnold, 6s.)—An Englishwoman in Belgium at the outbreak of the war brings back to her home on the East Coast a Belgian refugee whom she has encountered. Pauline, the Belgian, is a woman of considerable charm and a good man learns to love her, only to find that she

is in the pay of the German Government. Such a *dénouement* against a setting of ordinary English life has dramatic possibilities, and the author succeeds in keeping much of his readers' sympathy for Pauline, however deeply they may detest her crime.

**The Historical Nights Entertainment**, by Rafael Sabatini. (Martin Secker, 6s.)—Mr. Sabatini tells here the stories of some thirteen of the great nights of history, such as the murder of Rizzio and the drownings at Nantes. Though some of the stories he has chosen are almost too well known in outline, he contrives to fill in detail with a dramatic power which will make them of interest to many readers.

## THE SNARE OF THE TITLE

THE title of a book, of an essay or a poem should rise to its place as inevitably as cream rises to the top of milk; but what writer does not know the anguish of the search for the one coy phrase that shall half reveal and half conceal what is to follow, and what reader cannot tell of promise unfulfilled?

Some books—we have it on good authority—are to be read in parts, others to be read, but not curiously, and some few to be read wholly. Others there are that are at their best in library lists by reason of their charming titles. I refuse to read "Shining Ferry," for instance: for what if I should read it only to find that Shining Ferry is the name of a public-house and not that shimmering waterway from which I have started for the land of dreams ever since the two magic words caught my eye in a book catalogue?

"Between the Heather and the Northern Sea," though cumbrous as a title, is perfect as a picture, and if I like to hang it in an imaginary picture gallery—why not? And "Bog Myrtle and Peat" shall hang beside it.

An art student once told me the secret of naming a picture with subtlety and distinction: "You name it after its most insignificant detail," said she, entering for exhibition a masterly little portrait as "The Shell Necklace" as she spoke. But the opposite plan seems to be followed in literature, and the name is often too significant for the book, and hopes are aroused by the cover which die away later, leaving the reader beset by a vague, resentful "But I should have thought—" which bears out the old saying that if you want a thing well done you must do it yourself.

Take the most enthralling and provocative title of all, "Things that No One Tells." I have always put off reading that book too, for the name holds such rare promise, akin to that sense of expectancy which some days bring us, with their mysterious feeling of hovering on the verge of some great secret which, known, would prove at last "what God and man is."

Amiel's "Journal Intime" promises much also, but as a reader once said regretfully to me, "he doesn't seem ever to have done anything he was really ashamed of, you know." To count that a blemish in a book or a life would be, of course, unreasonable; but those who crave to pierce into the innermost secrets of another's mind with the thoroughness shown by the hero of Hans Andersen's "Galoshes of Fortune" make heavy demands on the word "intime." And "Things that No One Tells" suggests the hope that the book will answer the questions which conventionality forbids our asking our startled neighbour: Have you ever slipped through into life eternal for an hour—for a minute? How did you get through? Have you ever understood wisdom secretly? What do you think about in bed? Brave would he be who would ask such things, braver he who should answer them. And, indeed, frankness might hurt the teller more than it might benefit the hearer. To express a thought is not always to clarify it; it is sometimes to lose it. With the expression the fragrance and the wonder are gone for ever.

For sheer loveliness the names of some of Fiona Macleod's books rank first—"From the Hills of Dream," "The Divine Adventure" and "Where the Forest Murmurs." And embedded in these books are other titles which set imagination dancing—"The Book of the Opal," "The Book of White Magic," "The Little Book of the Great Enchantment." Not being a Gaelic scholar, I have never known whether the names are those of old Celtic romances or of dream books only. And so, lest such a lovely title should be wasted, once upon a time another "Little Book of the Great Enchantment" was begun, hand-made and pen-printed and written for four eyes only, a record of golden days . . . and then you died, my blessed one, and there was nothing more to write.

ISABEL BUTCHART.



# CORRESPONDENCE

## BLAKE'S PROPHETIC PORTRAIT.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—It is certainly remarkable that William Blake should, in his presentment of cruelty, have conceived so perfect a portrait of the Kaiser. On



## TWO MORE TYPES OF CRUELTY.

looking at the other figures it seems to me that Blake must have also had a prophetic glimmering of the Crown Prince and Von Tirpitz. I enclose a little sketch to illustrate the suggestion.—F. CARRUTHERS GOULD.

## EELS.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—Your correspondent, Mr. H. A. Wadworth, informs you that Lord Rhondda knows more about eels than I do, and of that I am sure there is no possible doubt whatever. I did not, however, in my letter on "Eel breeding," make any allusion to, and certainly no reflection upon, Lord Rhondda's knowledge of pisciculture. My letter referred to Lord Devonport's well intentioned recommendation to the public that they should become eel breeders, a ticklish business, since these slippery fish spawn in the deepest sea water they can find and then die. Eels attain their full developments in fresh water, which the elvers ascend soon after they are hatched. Like all other fish, their eventual size and weight depend upon their food supply. Their growth is slow. They are great devourers of the spawn of other fish, and are not looked upon with favour by anglers. Wherever eels abound other fresh-water fish become scarce. Curiously enough, the favourite food of the porpoise is the conger eel, and the favourite food of the otter is the common fresh-water eel. Personally, I should prefer otters to eels. I was certainly unaware that "thousands of tons" of eels from Denmark were imported into this country, or that "millions of tiny elvers" were exported from England to Denmark. These facts are interesting. In that case there must be many millions left uncaught in the streams and rivers frequented by eels in England; and, although we, unfortunately, cannot breed eels to please Lord Devonport, Lord Rhondda may be able to devise a plan for capturing a few thousand tons of them to help the food supply instead of leaving them to destroy worthier fish in their native haunts.—ARNOLD H. MATHEW.

## LORD RHONDDA AND ALLOTMENTS.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—Lord Rhondda urges men to dig land to produce more food. But there are thousands of men whose applications for war allotments remain unsatisfied to-day when digging is a work of the highest national importance. All sorts of obstacles are being placed in their path, many landlords will not stir without compulsion, and many local authorities will not use their powers unless they are forced by public opinion to do so. May I ask any of your readers who cannot get allotments to give the facts to the Food Production Department, 72, Victoria Street, London, S.W.1., and ask for its assistance?—JOSEPH HYDER, Secretary, Land Nationalisation Society, 96, Victoria Street, S.W.1.

## NATIONAL KITCHENS, ALLOTMENTS AND PIGS.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—Now that there is every prospect of the "National Kitchen" materialising, I should like to suggest that, where possible, allotments be cultivated for their benefit by voluntary labour. There must be a large number of people who are not able to give sufficient time to cultivate allotments for their own use, but would gladly give one or more evenings a week or even devote weekends to a healthy outdoor occupation with the knowledge that they were helping their country. Most local authorities have allotment committees, who could organise and supervise the movement. Pigs might be kept on the refuse from the allotments generally, and the refuse might also be collected from any eating-houses in the locality and fed to the pigs instead of to the

dust destructor. The pigs would also supply a certain amount of manure to the land. This would, in a way, be a revival on a small scale of the old manorial system of land cultivation, and the workers might be encouraged and rewarded by having the produce of a certain proportion of the land set aside for that purpose.—SIDNEY OETZMANN.

## ANCIENT TREES IN GRAY'S INN GARDENS.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—Bacon may have written Shakespeare's plays but I do not think he planted the catalpa in Gray's Inn Gardens which Captain Cook brought home with him from his voyage to Australasia. There is—or was—another catalpa in Lincoln's Inn Fields which always went by the name of "Captain Cook's Grandchild," as it was a slip from the parent tree in Gray's Inn.—V. J. BIDDULPH.

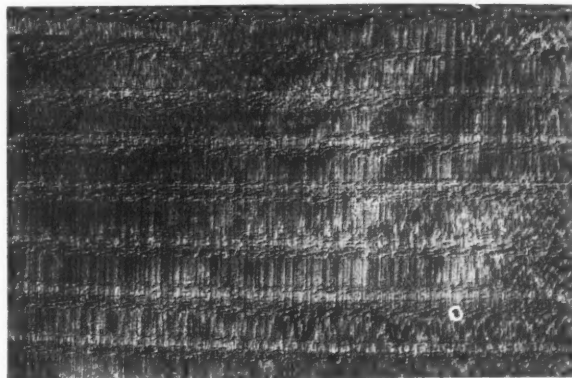
## MULBERRY TREES.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—Seeing the article on the mulberry tree in your paper of the 9th inst., I thought perhaps the following might be of interest to you. There was a very fine specimen of this tree growing in the garden of the Manor Farm, Deptford. The trunk or boll was only some 4ft. or 5ft. in height, but it then spread out to right and left to some 7yds. or 8yds. each way. The main boughs were of great thickness, and we could walk out on them. The tree itself was some 30ft. or 40ft. high, and spread out covering a circumference of 100yds. or so. We used to have two or three hammocks slung under the boughs in the summer-time. The only artificial support it had was two large posts to the main boughs and a chain bracing them together where they spread from the trunk as they showed a tendency to split. I do not know of any tradition as to who planted it, but it was not a great way off Sayer Court, the residence of the great John Evelyn. There was also a very fine specimen of the walnut tree in the garden with a clean trunk of about 40ft. and an enormous spread of top to it. As boys, we used to have short sticks to throw at the nuts when the leaves began to fall, and they were exposed, which was great sport for us. If these particulars are of any interest to you I shall be pleased to have sent them.—J. M.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—The article on "Ancient Mulberry Trees and Their Histories" (page 145) is interesting. The mulberry thrives well in London; in fact, is a capital smoke-resisting tree, many specimens being of remarkable size and vigour. At Charterhouse, in the City, there is quite a number of mulberry trees, but none remarkable for size. They are evidently of the same age, the largest when measured last summer being 25ft. high with a girth of stem of 3ft. 5ins. at a yard from the ground, and a branch spread of 21ft. in diameter. The three growing in what is known as the Preacher's Court are of about equal height, 22ft., and were raised from cuttings taken from Milton's mulberry at Cambridge eighty years ago. An accident seven years ago greatly marred the appearance of the old mulberry tree standing in the grounds of Victoria Park Hospital, one of the few such trees remaining in East London. The tree, according to local tradition, stood at the entrance to the palace of Bishop Bonner, who was wont to sit under it and plan the holocausts of heretical Protestants. It is 30ft. high, 30ft. in branch spread, while the stem girths 4ft. 8ins. at a yard from the ground. One of the main branches having rotted through at the elbow, broke off from the trunk; but with a little attention in the matter of propping and cementing, this tree should last for many years. Southwark once had a sapling from Shakespeare's mulberry tree at Stratford-on-Avon presented to the Council. One foggy November night the precious tree was planted in the forecourt of the Town Hall in Wandsworth Road. Unhappily, the small boys used to delight to uproot the baby mulberry, which now, it is believed, has been planted surreptitiously in a place of safety. A mulberry tree of goodly proportions flourished for years on the site of the new Post Office buildings, and there is a row of large mulberry trees in the



## THE WOOD OF THE MULBERRY TREE.

Temple Gardens which have often borne heavy crops of fruit. Near the Westminster end of Victoria Street and almost hemmed in by bricks and mortar may be seen a mulberry tree of large size and in excellent health. Mulberry timber is of a rich colour, smooth and clean, and, as will be seen from the illustration, with a beautiful grain. When obtainable, it is valuable as cabinet wood, and is frequently turned into fancy household articles. It is little apt to crack or warp, and its lasting properties are well known. It makes excellent firewood.—A. D. W.

## FRIENDLY ANIMALS.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—I saw in your paper a photograph of a spaniel and a hare which were on good terms. I enclose four photographs of a similar thing that may interest



## SHIPMATES.

duced to each other at the same time. They were friendly at once, the dog and the hare playing in an extraordinary way, chasing each other, and sometimes the hare would jump in the air and land on the spaniel's back. Meanwhile the cat looked on with a look of pained surprise, but was not in the least frightened. I am afraid the photographs are not good ones, but I thought they might be of interest.—A. A. L. F.

[Unfortunately the pictures which showed the spaniel and hare together were not suitable for reproduction.—Ed.]

## SPINNING GALLERIES.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—In the little village of Low Hartsop, near Patterdale, there is a farm-



## A SPINNING GALLERY.



## IN THE LAKE COUNTRY.

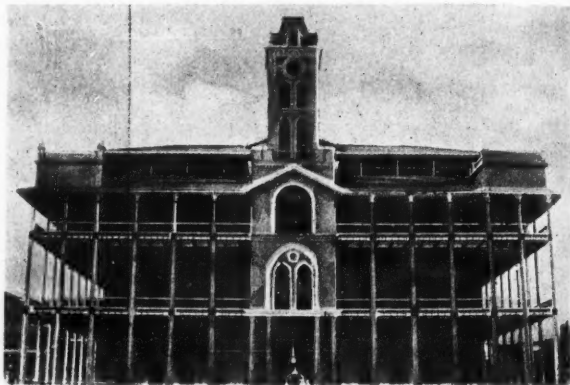
house and a very picturesque old cottage, both of which have "spinning galleries," traditionally so called. They are evidently of great age, and spinning galleries are so rare in England now that they have an unusual interest. The neighbourhood of the English Lakes is full of traces of the Scandinavian occupation; the names of the dalesmen are those of the Norsemen, as Canon Rawnsley has pointed out, and the houses are built according to their fashion. Mr. S. O. Addy, in his "Evolution of English Houses," refers to identical arrangements in old Norwegian and English houses; for instance, in a house at Upper Midhope, near Penistone, with the date 1671, there is a chamber, now a workshop, but originally a weaving room where spinning and weaving were

done for the use of the inmates, such a room being known as a "spinning house." The same arrangements may still be seen in Norway. At Bygdø, near Christiania, there is a village composed of these old timber houses with all kinds of balconies, and *slabur*—that is, outside ladders, which stand on piles of wood and are very ornamental; these also are surrounded with balconies. The spinning galleries also remind us of the balconies round Swiss chalets, in which the Swiss women do a great deal of work and knitting. In Norway at the present day most of the spinning is done in the winter and, therefore, indoors, but evidently in the Lake villages the spinning was carried on in the galleries under the shelter of the eaves in the summer time.—A. A. TEMPLE.

## A SULTAN'S PALACE.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—The words, "the Sultan of Zanzibar," form one of those real life phrases which still have a flavour of fairyland. They would not seem out of place



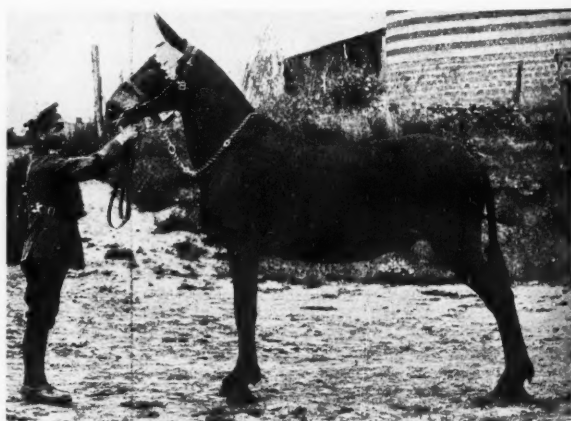
## THE PALACE OF THE SULTAN OF ZANZIBAR.

in any tale of wonder or enchantment. Perhaps this photograph of the strange looking palace in which that monarch deigns to dwell in his clove-scented coral island will not quite destroy the visions of romance conjured up by the syllables of his name?—H.

## MULES IN WAR.

[TO THE EDITOR OF "COUNTRY LIFE."]

SIR,—While home on leave a short while ago I was interested in reading the illustrated articles on mules in one of your issues. We have been employing these animals for many months now, and, of course, we have long since cast away any of the prejudices which we may have had and which, I must admit, were mostly groundless. For draught purposes of every sort we prefer them to horses. In fact, on a long march it is difficult for a composite section of mules and horses to keep good march discipline in that the mules are much superior walkers. To the average man, even used to horses, the mule was usually associated with vice of some sort or other. He would either bite or kick one! But, although there are a small proportion who at



## THE MULE AT HIS BEST.

first are not too particular about "shaking hands" with one, it is nearly always attributable to fear owing to previous bad treatment, and as soon as they realise that they are being treated kindly, they settle down. In stables, too, one finds very much fewer kicks with mules than with horses. I do not think it was realised until a year or so ago how mules would repay good treatment. This has been shown by the wonderful turn-outs seen at Divisional, Corps and Army shows. I am enclosing a photograph of one of our mules which won first prize for the best single stripped mule at our Divisional show. This prize was won last year, the same mule having been all through the battles of the Somme the previous year. I have also some photographs of two other teams of six of just such similar mules as the one shown in the photograph, but I am afraid they will not reproduce well. These two teams won first and second prizes in the Army show, also a special cup. I am sorry these photographs are not suitable for reproduction, as they would give the general public a good idea of how the "old donk" can be turned out.—B. H. S., R.F.A.



# MACHINERY NOTES FOR MODERN FARMERS

## MILKING MACHINERY.

**P**ROBABLY the most difficult problem in connection with labour on the farm is the maintenance of an adequate staff of competent milkers. This problem has been gradually getting more and more troublesome for some years past, but has suddenly become acute through conditions imposed by the war.

It must be admitted that the working hours of a milker are not very attractive, neither do the wages usually paid compare favourably with those obtainable from many other less skilled occupations, therefore it is not unnatural that the supply of competent milkers is short of the demand. Perhaps even more than the early rising and the amount of pay, the necessity to work seven days a week is the factor which militates most strongly against obtaining recruits for the milking ranks.

Many inventions and improvements in farm machinery have been introduced during recent years for the purpose of reducing the amount of labour necessary on the farm, and for field work they have been very largely adopted. In the cow-



1.—The valve open.

barn, however, motor power for feed preparing purposes and milking machines to assist manual milkers have not yet been adopted to anything like the same extent. The question of motor power for other purposes than milking I will not discuss now, as it is a simple, straightforward issue that will work out its own salvation in due course. The milking machine is not quite so straightforward a matter, as a great amount of prejudice and misinformation stands in its way.

The most usual thing one hears is that milking machines ruin the cows. This I have good reason to believe is not true, as I have heard much evidence to the contrary. It, however, is true that milking machines *can be used* to the cow's detriment. It is the old story over again, machinery requires to have intelligence and care applied to its manage-

ment. Some machinery, such as the machines under discussion, require comparatively little intelligence beyond that of the average farm hand, but they do require great care to the extent that the machine should not be left at work on the cow after her yield is complete. It is generally conceded now that the most practicable plan of operations is to remove the machine when the time for stripping arrives and to have the stripping done by hand.

The milking machine does not eliminate hand milking entirely, but it enables one careful supervisor of the machine and one good stripper to do the work of several hand milkers.

Quite the best system is to have one person (not necessarily one able to milk) in charge of the machine

whose sole duty at the time is to remove the connections from each cow as soon as the indicator shows that the major portion of the milk has been delivered. The stripper would then complete the operation. As the stripper could deal with many more cows than could be completely milked by hand, the milking machine enables an unskilled person to displace several skilled milkers.

The milk business has always seemed to me to be a most trying one for the owner of the herd, as milking time cannot

be put off, and the milking staff know it. In many cases that have come under my own observation the milkers have been most difficult to deal with because of their power to do damage or, at any rate, to create serious difficulties at a moment's notice. Such conditions have been the direct cause of many slovenly and

insanitary practices in the cow-barns, as the owner dare not enforce his orders without risk of losing his staff. A short time ago the owner of a large milking herd who had installed milking machinery stated that he was quite satisfied with his experiment in every way, but one feature alone was worth to him the whole cost of the apparatus. That feature is the independence now felt by him in regard to his milking staff.

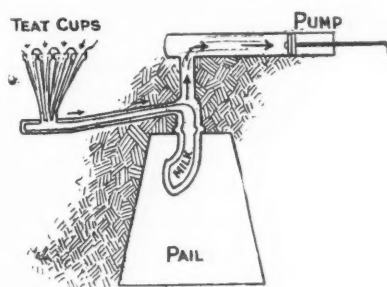
With the aid of the milking machines he and the members of his family at a pinch can manage without the regular milkers entirely, and as a result the milkers realise that they are no longer indispensable and they behave accordingly.

There are several entirely distinct methods of operation utilised by the principal manufacturers, each one of whom claims some advantages for his system.

The Hinman milker exercises an intermittent suction on the teats of the cow, there being a complete release between each suction effort.



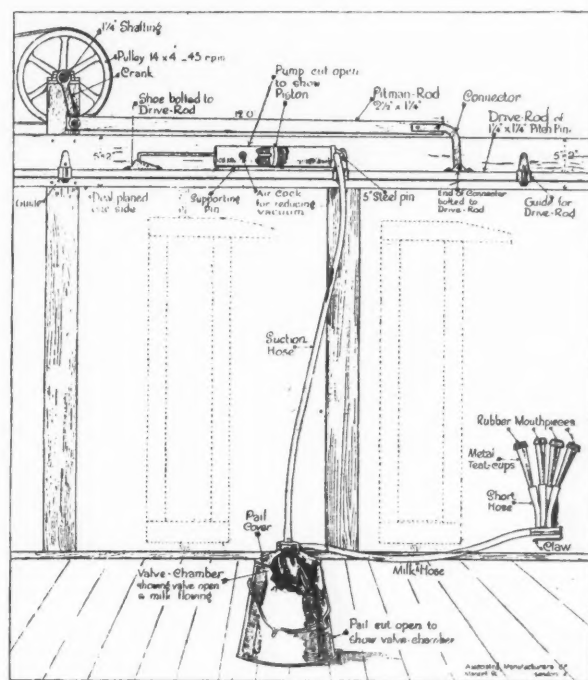
3.—The Hinman Milker.



4.—In section.



2.—The lid or cover.



5.—The complete installation.

The Amo milking machine also works with an intermittent action, but at the same time always maintains a certain amount of suck which it is claimed secures the same effect as when a calf is sucking.

Other machines exercise a continuous suction, and others, again, endeavour to imitate the squeezing action of dry hand milking.

It would appear that either the intermittent suction or imitation hand milking systems are preferable to the constant suction machines, as the latter depend upon an unnatural action against which the rival manufacturers make specific charges of inferiority.

The Hinman is probably the most simple form of milking machine on the market, and it is difficult to imagine a more simple contrivance. The mechanism may be described briefly as follows:

A small petrol, oil or electric motor by means of a Pitman rod gives motion to a shaft or drive rod which runs parallel with the range of cow stalls. This drive rod is of wood, and is not rotated, but works with a reciprocating motion by sliding endways in its bearings. The pumps which actuate the milking machinery are of the piston type, and are mounted parallel to the drive rod, from which the necessary motion is obtained. The pumps are small, and can instantly be detached when desired.

The only remaining parts are a pail cover which contains a special non-return valve, the teat cups and connecting tubes.

Diagrams 5 and 6 show the complete installation. It will be noted that no vacuum tank is used.

The chief feature of the Hinman milker is the simple non-return valve, which enables the action of the piston

Another point is that no air is drawn through the tubes or machine to mix with and contaminate the milk.

For the intermittent suction action, in addition to being in general principles similar to the natural action of a calf while feeding, the claim is made that it has the specific advantage that the blood continues to circulate naturally in the teat, and the latter does not become distended, as may happen when constant suction is applied.

An engine of one horse-power is required to operate three machines, all of which can be managed by one competent man, and it is possible for a total of fifteen to twenty cows to be milked by him in one hour.

It is stated that more than 21,000 Hinman milkers are now in use.

I will describe and illustrate other milking machines in the next issue.

PLOUGHSHARE.

#### CORRESPONDENCE.

##### ELECTRIC POWER ON THE FARM.

SIR,—We notice a letter from Messrs. Newall and Arnott in your issue of February 9th with reference to the use of electricity on a group of farms covering approximately 4,000 acres. As we have given attention to this subject with a view to equipping farms, both for power purposes and for high voltage discharge to stimulate growth, known as electro-culture, perhaps the following information may be of interest. Electricity has already been distributed on a commercial scale abroad with satisfactory results, and at Hereford and Kilmarnock it is used on a number of farms for driving various machines as well as lighting, but we believe it has not been used for ploughing on any scale in England. The experiments made in stimulating discharge are also stated to have been successful at Hereford and Dumfries, though at Wisley the Royal Horticultural Society are not, we understand, at present convinced that the trials which they have made can be considered a success.

Further research is necessary to determine under what conditions of soil and atmosphere the high tension discharge system can advantageously be employed, but it is proved beyond doubt that under certain conditions crops have been increased to an extent which will amply justify the necessary outlay, the cost of working the apparatus being almost negligible. As regards ploughing, the system we advocate is similar to that adopted in steam ploughing, viz., the drawing of the plough backwards and forwards by means of wire ropes, the steam engines at each end being replaced by electric motors. On flat ground one motor may be used fitted with two drums, the wire passing over a pulley at the far end, and possibly an endless rope drive will be developed. The motors are supplied by flexible insulated cables run from the nearest point of connection, the horse power required being from 25

to 90, according to the width of the plough, depth of ploughing and speed. By this method all carting of fuel and water is avoided and less skilled labour is required. The mechanical efficiency is greater than that obtainable with tractor ploughs, which use a large proportion of the power in propelling themselves. Another drawback to self-contained tractor ploughs is the compression of the soil under the driving wheels; and especially in heavy or wet soils it is found that the crops are lighter wherever the wheels have passed.

The waste space required by most tractors in turning round at the ends of the field is considerable, and this portion is heavily compressed. We believe it is admitted that an ideal system is to provide the lightest possible plough, a result which is best achieved by the above wire rope haulage system. The results obtained with wire rope ploughing as regards the condition of the soil are, we understand, superior to any obtainable with tractor ploughing, except possibly on light and friable soils. We are of opinion that if the project of erecting super-generating stations in different parts of the country is carried out, and facilities for distribution in agricultural districts are increased, the problems of ploughing, harrowing, threshing, chaff-cutting, sawing and lighting on farms will all be solved by drawing current from overhead mains brought to various points on the farm, to which conductors can readily be connected. Motors, ploughs and other tackle could be rented out to the farmers in rotation, so that they would be spared the expense and anxiety of keeping horses, and their capital outlay would be reduced.

The resulting reduction of working costs will come as a welcome relief to the sorely tried farmer, who is expected to produce on an extended scale, from patriotic motives, at prices which he does not find remunerative under existing conditions.—DRAKE AND GORHAM, LIMITED.

Her Majesty the Queen visited Messrs. Tredegar's show-rooms at 7, Brook Street on the afternoon of February 13th to inspect a suite of decorated furniture for Princess Mary's rooms at Windsor Castle.



6.—THE HINMAN MILKER IN USE.

to create a vacuum during its suction stroke, but prevents a corresponding compression during the return stroke.

The illustration, Fig. 1, shows the valve open. It will be seen that it is a simple flap valve working on a hinge. The suction of the piston in the pump barrel keeps this valve closed on the withdrawing stroke, and the weight of milk drawn in plus the action of the piston on its return stroke open the valve and release the milk, which falls into the pail below. Diagrams 3 and 4 help to explain this action.

In broad principle this is the whole of the Hinman milker, but there are many details to consider.

For instance, no special pail with divisions or vacuum chambers is necessary, as the whole operating mechanism, apart from the pump itself, is part and parcel of a lid or cover (shown in Fig. 2) which can be dropped on to any suitable receptacle for the milk. No air-tight joints are required to be made. The teat cups are of metal, each being fitted with soft renewable rubber mouths. These mouths are made in several sizes so as to fit snugly on to any sizes of teats.

In normal circumstances the vacuum, or rather partial vacuum, created in the tubes by the suction of the pump is  $7\frac{1}{2}$  lb. per square inch, just half atmospheric pressure; but for specially easy milking cows this partial vacuum can be instantly reduced if desired by means of a regulating tap provided for this purpose. A point upon which the makers lay great stress is that while the suction on the teats can be reduced, it is impossible for the suction to be increased above normal or to a point which might be injurious to the cow. The makers say that the Hinman milker might be left for an hour on any cow without injury to her.